

# Sequence Listing

- <110> Ashkenazi, Avi J.  
 Baker, Kevin P.  
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 Eaton, Dan L.  
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 Gerritsen, Mary E.  
 Goddard, Audrey  
 Godowski, Paul J.  
 Grimaldi, J. Christopher  
 Gurney, Austin L.  
 Kljavin, Ivar J.  
 Napier, Mary A.  
 Pan, James  
 Paoni, Nicholas F.  
 Roy, Margaret Ann  
 Stewart, Timothy A.  
 Tumas, Daniel  
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 Williams, P. Mickey  
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 Zhang, Zemin
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 <211> 251  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe  
 50 55 60  
 Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn  
 65 70 75  
 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala  
 80 85 90  
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn  
 95 100 105

Trp Ile Cys Ile Val Ile Thr Gly Leu Ala Met Asp Met Gln Leu  
 110 115 120  
 Leu Met Ile Pro Leu Ile Met Ser Val Leu Tyr Val Trp Ala Gln  
 125 130 135  
 Leu Asn Arg Asp Met Ile Val Ser Phe Trp Phe Gly Thr Arg Phe  
 140 145 150  
 Lys Ala Cys Tyr Leu Pro Trp Val Ile Leu Gly Phe Asn Tyr Ile  
 155 160 165  
 Ile Gly Gly Ser Val Ile Asn Glu Leu Ile Gly Asn Leu Val Gly  
 170 175 180  
 His Leu Tyr Phe Phe Leu Met Phe Arg Tyr Pro Met Asp Leu Gly  
 185 190 195  
 Gly Arg Asn Phe Leu Ser Thr Pro Gln Phe Leu Tyr Arg Trp Leu  
 200 205 210  
 Pro Ser Arg Arg Gly Gly Val Ser Gly Phe Gly Val Pro Pro Ala  
 215 220 225  
 Ser Met Arg Arg Ala Ala Asp Gln Asn Gly Gly Gly Arg His  
 230 235 240  
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 245 250

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 <211> 1373  
 <212> DNA  
 <213> Homo sapiens

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 gccagagacc ggtgattttg gtggcctgtg ttccccttgt tttgatgat 400  
 gaagaagaaa gcaattgac ctatacagag attcatcagg aatacaaga 450  
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 aagatcaatt tcaagaagca tgcactctc ctcttgcaaa gaccataca 550  
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 taaagaggag attgcttga gagaaactca aagaagaagt tattaataag 1300  
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<210> 8

<211> 367

<212> PRT

<213> Homo sapiens

<400> 8

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				20				25					30	
Asp	Phe	Val	Glu	Gln	Lys	Cys	Glu	Val	Asn	Cys	Lys	Gly	Gly	His
				35				40					45	
Val	Ile	Thr	Pro	Gly	Ser	Pro	Glu	Pro	Val	Ile	Leu	Val	Ala	Cys
				50				55					60	
Val	Pro	Leu	Val	Phe	Asp	Asp	Glu	Glu	Glu	Ser	Lys	Leu	Thr	Tyr
				65				70					75	
Thr	Glu	Ile	His	Gln	Glu	Tyr	Lys	Glu	Leu	Val	Glu	Lys	Leu	Leu
				80				85					90	
Glu	Gly	Tyr	Leu	Lys	Glu	Ile	Gly	Ile	Asn	Glu	Asp	Gln	Phe	Gln
				95				100					105	
Glu	Ala	Cys	Thr	Ser	Pro	Leu	Ala	Lys	Thr	His	Thr	Ser	Gln	Ala
				110				115					120	
Ile	Leu	Gln	Pro	Val	Leu	Ala	Ala	Glu	Asp	Phe	Thr	Ile	Phe	Lys
				125				130					135	
Ala	Met	Met	Val	Gln	Lys	Asn	Ile	Glu	Met	Gln	Leu	Gln	Ala	Ile
				140				145					150	

Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	155	160	165
Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	170	175	180
Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	185	190	195
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	200	205	210
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	215	220	225
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val	230	235	240
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys	245	250	255
Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys	260	265	270
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn	275	280	285
Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg	Glu	His	Tyr	290	295	300
Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met	305	310	315
Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro	Thr	320	325	330
Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu	335	340	345
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu	350	355	360
Lys	Glu	Glu	Val	Ile	Asn	Lys									365		

<210> 9  
 <211> 418  
 <212> DNA  
 <213> Homo sapiens

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 aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150  
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 ctgtgttggc agcagaagat ttactatct ttaaagcaat gatggtccag 250  
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tggtgtatta cctgactgct taacogatgg ctctgatgtg gtcagtgaac 350  
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gaggaatatg accaggaa 418

<210> 10  
<211> 22  
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<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 10  
ttgacctata cagagattca tc 22

<210> 11  
<211> 23  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 11  
ctaagaactt ccctcaggat ttt 23

<210> 12  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
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<210> 13  
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<212> DNA  
<213> Homo sapiens

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tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgtttcttc 150  
cactagaagc tcttctgagg gaggaatta aaaaacagtg gaatggaaaa 200  
acagtgtctgt agtcactctg taatatgtct ctgtcaaca atgtatacat 250  
tctgtctagg tgccatattc attgctttaa gctcaagtcg catcttacta 300  
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cattctgtgt tataaagaaa gatcatcaaa gtagaattt gaaatatgct 450



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<210> 14

<211> 424

<212> PRT

<213> Homo sapiens

<400> 14

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				20					25					30
Ser	Ser	Arg	Ile	Leu	Leu	Val	Lys	Tyr	Ser	Ala	Asn	Glu	Glu	Asn
				35					40					45
Lys	Tyr	Asp	Tyr	Leu	Pro	Thr	Thr	Val	Asn	Val	Cys	Ser	Glu	Leu
				50					55					60
Val	Lys	Leu	Val	Phe	Cys	Val	Leu	Val	Ser	Phe	Cys	Val	Ile	Lys
				65					70					75
Lys	Asp	His	Gln	Ser	Arg	Asn	Leu	Lys	Tyr	Ala	Ser	Trp	Lys	Glu
				80					85					90
Phe	Ser	Asp	Phe	Met	Lys	Trp	Ser	Ile	Pro	Ala	Phe	Leu	Tyr	Phe
				95					100					105
Leu	Asp	Asn	Leu	Ile	Val	Phe	Tyr	Val	Leu	Ser	Tyr	Leu	Gln	Pro
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Ala Met Ala Val	Ile Phe Ser Asn Phe Ser	Ile Ile Thr Thr	Ala
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Leu Leu Phe Arg	Ile Val Leu Lys Arg Arg	Leu Asn Trp Ile	Gln
	140	145	150
Trp Ala Ser Leu	Leu Thr Leu Phe Leu Ser	Ile Val Ala Leu Thr	
	155	160	165
Ala Gly Thr Lys	Thr Leu Gln His Asn Leu	Ala Gly Arg Gly Phe	
	170	175	180
His His Asp Ala	Phe Phe Ser Pro Ser Asn	Ser Cys Leu Leu Phe	
	185	190	195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn Cys	Thr Ala Lys Glu Trp	
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Thr Phe Pro Glu	Ala Lys Trp Asn Thr Thr	Ala Arg Val Phe Ser	
	215	220	225
His Ile Arg Leu	Gly Met Gly His Val Leu	Ile Ile Val Gln Cys	
	230	235	240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr Asn	Glu Lys Ile Leu Lys	
	245	250	255
Glu Gly Asn Gln	Leu Thr Glu Ser Ile Phe	Ile Gln Asn Ser Lys	
	260	265	270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn Gly	Leu Thr Leu Gly Leu	
	275	280	285
Gln Arg Ser Asn	Arg Asp Gln Ile Lys Asn	Cys Gly Phe Phe Tyr	
	290	295	300
Gly His Ser Ala	Phe Ser Val Ala Leu Ile	Phe Val Thr Ala Phe	
	305	310	315
Gln Gly Leu Ser	Val Ala Phe Ile Leu Lys	Phe Leu Asp Asn Met	
	320	325	330
Phe His Val Leu	Met Ala Gln Val Thr Thr	Val Ile Ile Thr Thr	
	335	340	345
Val Ser Val Leu	Val Phe Asp Phe Arg Pro	Ser Leu Glu Phe Phe	
	350	355	360
Leu Glu Ala Pro	Ser Val Leu Leu Ser Ile	Phe Ile Tyr Asn Ala	
	365	370	375
Ser Lys Pro Gln	Val Pro Glu Tyr Ala Pro	Arg Gln Glu Arg Ile	
	380	385	390
Arg Asp Leu Ser	Gly Asn Leu Trp Glu Arg	Ser Ser Gly Asp Gly	
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Glu Glu Leu Glu	Arg Leu Thr Lys Pro Lys	Ser Asp Glu Ser Asp	
	410	415	420
Glu Asp Thr Phe			

<210> 15  
<211> 755  
<212> DNA  
<213> Homo sapiens

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ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700  
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<210> 16  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 16  
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<210> 17  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 17  
tcagagaatt ccttcagga 20

<210> 18  
<211> 40  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtctg agtcatactg taatatgtc cttgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

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gcggcctcgc gggcagagga gcatcccgtc taccaggtcc caagcgccgt 150  
ggcccgccgg tcattggccaa aggagaaggc gccgagagcg gctccgcgpc 200  
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<210> 20

<211> 458

<212> PRT

<213> Homo sapiens

<400> 20

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Trp	Ala	Glu	Pro	Gly	Met	Pro	Ser	Gln	Thr	Pro	Trp	Trp	Ala	Ser
				20					25					30
Ala	Ser	Ala	Asn	Pro	Pro	Gly	Pro	Ala	Trp	Val	Ala	Leu	Cys	Pro
				35					40					45
Gly	Ser	Ser	Ser	Pro	Arg	Pro	Trp	Pro	Ser	Leu	Pro	Thr	Ser	Ser
				50					55					60
Ser	Gly	Ser	Cys	Pro	Thr	Ser	His	Thr	Ala	Arg	Pro	Ile	Gly	Thr
				65					70					75
Cys	Phe	Ser	Ile	Ala	Ser	Leu	Lys	Gln	Trp	Ser	Arg	Val	Ser	Met
				80					85					90
Phe	Pro	Thr	Arg	Leu	Ser	Pro	Cys	Ser	Ser	Ala	Thr	Glu	Gln	Thr
				95					100					105

Glu	Arg	Asp	Ser	Ala	Thr	Ala	Tyr	Arg	Met	Thr	Val	Glu	Val	Leu
				110					115					120
Gly	Thr	Val	Leu	Gly	Thr	Ala	Ile	Gln	Gly	Gln	Ile	Val	Gly	Gln
				125					130					135
Ala	Asp	Thr	Pro	Cys	Phe	Gln	Asp	Phe	Asn	Ser	Ser	Thr	Val	Ala
				140					145					150
Ser	Gln	Ser	Ala	Asn	His	Thr	His	Gly	Thr	Thr	Ser	His	Arg	Glu
				155					160					165
Thr	Gln	Lys	Ala	Tyr	Leu	Leu	Ala	Ala	Gly	Val	Ile	Val	Cys	Ile
				170					175					180
Tyr	Ile	Ile	Cys	Ala	Val	Ile	Leu	Ile	Leu	Gly	Val	Arg	Glu	Gln
				185					190					195
Arg	Glu	Pro	Tyr	Glu	Ala	Gln	Gln	Ser	Glu	Pro	Ile	Ala	Tyr	Phe
				200					205					210
Arg	Gly	Leu	Arg	Leu	Val	Met	Ser	His	Gly	Pro	Tyr	Ile	Lys	Leu
				215					220					225
Ile	Thr	Gly	Phe	Leu	Phe	Thr	Ser	Leu	Ala	Phe	Met	Leu	Val	Glu
				230					235					240
Gly	Asn	Phe	Val	Leu	Phe	Cys	Thr	Tyr	Thr	Leu	Gly	Phe	Arg	Asn
				245					250					255
Glu	Phe	Gln	Asn	Leu	Leu	Leu	Ala	Ile	Met	Leu	Ser	Ala	Thr	Leu
				260					265					270
Thr	Ile	Pro	Ile	Trp	Gln	Trp	Phe	Leu	Thr	Arg	Phe	Gly	Lys	Lys
				275					280					285
Thr	Ala	Val	Tyr	Val	Gly	Ile	Ser	Ser	Ala	Val	Pro	Phe	Leu	Ile
				290					295					300
Leu	Val	Ala	Leu	Met	Glu	Ser	Asn	Leu	Ile	Ile	Thr	Tyr	Ala	Val
				305					310					315
Ala	Val	Ala	Ala	Gly	Ile	Ser	Val	Ala	Ala	Ala	Phe	Leu	Leu	Pro
				320					325					330
Trp	Ser	Met	Leu	Pro	Asp	Val	Ile	Asp	Asp	Phe	His	Leu	Lys	Gln
				335					340					345
Pro	His	Phe	His	Gly	Thr	Glu	Pro	Ile	Phe	Phe	Ser	Phe	Tyr	Val
				350					355					360
Phe	Phe	Thr	Lys	Phe	Ala	Ser	Gly	Val	Ser	Leu	Gly	Ile	Ser	Thr
				365					370					375
Leu	Ser	Leu	Asp	Phe	Ala	Gly	Tyr	Gln	Thr	Arg	Gly	Cys	Ser	Gln
				380					385					390
Pro	Glu	Arg	Val	Lys	Phe	Thr	Leu	Asn	Met	Leu	Val	Thr	Met	Ala
				395					400					405
Pro	Ile	Val	Leu	Ile	Leu	Leu	Gly	Leu	Leu	Leu	Phe	Lys	Met	Tyr
				410					415					420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln  
425 430 435

Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp  
440 445 450

Ser Thr Glu Leu Ala Ser Ile Leu  
455

<210> 21  
<211> 571  
<212> DNA  
<213> Homo sapiens

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accctatgaa gccacgacgt ctgagccaat cgctacttc cggggccctac 150  
ggctggcat gagccacgac ccatacatca aacttattac tggcttcctc 200  
ttcacctcct tggctttcat gctgggtggag gggaaacttg tcttgttttg 250  
cacctacacc ttgggttcc gcaatgaatt ccagaatcta ctctggcca 300  
tcctgtcttc ggccacttta accattccca tctggcagtg gttcttgacc 350  
cggtttgcca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400  
atttctcatc ttgggtggcc tcctggagag taacctcatc attacatag 450  
cggtagctgt ggcagctggc atcagtggtg cagctgcctt ctactacc 500  
tggtccatgc tgcctgatgt cattgacgac ttccatctga agcagcccca 550  
cttccatgga accgagccca t 571

<210> 22  
<211> 1173  
<212> DNA  
<213> Homo sapiens

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aaacagaaaa cctgttagaa atgtgtgtgt ttccagcaagg cctcagtttc 150  
cttccttcag ccttgttaat ttggacatct gctgctttca tattttcata 200  
cattactgca gtaacactcc accatataga ccgggttcta ccttatatca 250  
gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300  
aatattgagg cagttttatg cattgtctac atttatgttc gttataagca 350  
agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaacaagg 400  
ctggccttgt acttgaata ctgagttgtt taggacttcc tattgtggca 450



aacttcaga aaacaaccct tttgctgca catgtaagt gagctgtgct 500  
taccttttgt atgggctcat tatatatgtt tgttcagacc atcctttcct 550  
accaaatagca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600  
ttgttggtta tctggtgtgg agtaagtgca cttagcatgc tgacttgctc 650  
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700  
attggaaccc cgaggacaaa ggttatgtgc ttcacatgat cactactgca 750  
gcagaatggt ctatgtcatt ttccttcttt ggttttttcc tgacttacat 800  
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taaccctcta tgacactgca ccttgcccta ttaacaatga acgaacacgg 900  
ctactttcca gagatatgtg atgaaaggat aaaatatttc tgtaagtatt 950  
atgattctca gggattgggg aaaggttcac agaagttgct tattcttctc 1000  
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050  
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaggat 1100  
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150  
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<210> 23

<211> 266

<212> PRT

<213> Homo sapiens

<400> 23

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Val	Ile	Trp	Thr	Ser	Ala	Ala	Phe	Ile	Phe	Ser	Tyr	Ile	Thr	Ala
				20					25					30
Val	Thr	Leu	His	His	Ile	Asp	Pro	Ala	Leu	Pro	Tyr	Ile	Ser	Asp
				35					40					45
Thr	Gly	Thr	Val	Ala	Pro	Glu	Lys	Cys	Leu	Phe	Gly	Ala	Met	Leu
				50					55					60
Asn	Ile	Ala	Ala	Val	Leu	Cys	Ile	Ala	Thr	Ile	Tyr	Val	Arg	Tyr
				65					70					75
Lys	Gln	Val	His	Ala	Leu	Ser	Pro	Glu	Glu	Asn	Val	Ile	Ile	Lys
				80					85					90
Leu	Asn	Lys	Ala	Gly	Leu	Val	Leu	Gly	Ile	Leu	Ser	Cys	Leu	Gly
				95					100					105
Leu	Ser	Ile	Val	Ala	Asn	Phe	Gln	Lys	Thr	Thr	Leu	Phe	Ala	Ala
				110					115					120
His	Val	Ser	Gly	Ala	Val	Leu	Thr	Phe	Gly	Met	Gly	Ser	Leu	Tyr
				125					130					135

Met	Phe	Val	Gln	Thr	Ile	Leu	Ser	Tyr	Gln	Met	Gln	Pro	Lys	Ile
				140					145					150
His	Gly	Lys	Gln	Val	Phe	Trp	Ile	Arg	Leu	Leu	Val	Ile	Trp	
				155					160					165
Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu
				170					175					180
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp
				185					190					195
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala
				200					205					210
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr
				215					220					225
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn
				230					235					240
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn
				245					250					255
Asn	Glu	Arg	Thr	Arg	Leu	Leu	Ser	Arg	Asp	Ile				
				260					265					

<210> 24  
 <211> 485  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 14, 484  
 <223> unknown base

<400> 24  
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 gaggcgagat cctcaaacgc ctagtgctt cgcgcttcgc gagaaatca 150  
 gcggtctaat taattcotct ggtttgttga agcagttacc aagaattctc 200  
 aaccctttcc cacaaaagct aattgagtac acgttctctg tgagtacacg 250  
 ttctctgtga ttacaaaag gtgcaggtat gagcaggctc gaagactaac 300  
 attttgtgaa gttgtaaac agaaaacctg ttagaatgt ggtggtttca 350  
 gcaaggcttc agtttcttct cttcagccct tgtaatttgg acatctgctg 400  
 ctttcatatt ttcatacatl actgcagtaa cactccacca tatagaccgc 450  
 gctttacctt atatcagtga cactggtaca gtanc 485

<210> 25  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 25  
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<210> 26  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 26  
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27  
<211> 1399  
<212> DNA  
<213> Homo sapiens

<400> 27  
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ccttctggtc ttcccggtt gcaccttcgc cttgtacttg ctgtcgacgc 150  
gactgccccg cgggcggaga ctgggtccca ccgaggagge tggaggcagg 200  
tcgctgtggt tccccctcca cctggcagag ctgcgggagc tctctgaggt 250  
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agctgttggc cattgccatg gtggcattaa ttcttggaac cctcatataa 800  
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 gccaggcgtg gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300  
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 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28  
 <211> 264  
 <212> PRT  
 <213> Homo sapiens

<400> 28  
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 Phe Ala Leu Tyr Leu Leu Ser Thr Arg Leu Pro Arg Gly Arg Arg  
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 Leu Gly Ser Thr Glu Ala Gly Gly Arg Ser Leu Trp Phe Pro  
 35 40 45  
 Ser Asp Leu Ala Glu Leu Arg Glu Leu Ser Glu Val Leu Arg Glu  
 50 55 60  
 Tyr Arg Lys Glu His Gln Ala Tyr Val Phe Leu Leu Phe Cys Gly  
 65 70 75  
 Ala Tyr Leu Tyr Lys Gln Gly Phe Ala Ile Pro Gly Ser Ser Phe  
 80 85 90  
 Leu Asn Val Leu Ala Gly Ala Leu Phe Gly Pro Trp Leu Gly Leu  
 95 100 105  
 Leu Leu Cys Cys Val Leu Thr Ser Val Gly Ala Thr Cys Cys Tyr  
 110 115 120  
 Leu Leu Ser Ser Ile Phe Gly Lys Gln Leu Val Val Ser Tyr Phe  
 125 130 135  
 Pro Asp Lys Val Ala Leu Leu Gln Arg Lys Val Glu Glu Asn Arg  
 140 145 150  
 Asn Ser Leu Phe Phe Phe Leu Leu Phe Leu Arg Leu Phe Pro Met  
 155 160 165  
 Thr Pro Asn Trp Phe Leu Asn Leu Ser Ala Pro Ile Leu Asn Ile  
 170 175 180  
 Pro Ile Val Gln Phe Phe Phe Ser Val Leu Ile Gly Leu Ile Pro  
 185 190 195  
 Tyr Asn Phe Ile Cys Val Gln Thr Gly Ser Ile Leu Ser Thr Leu  
 200 205 210

Thr Ser Leu Asp Ala Leu Phe Ser Trp Asp Thr Val Phe Lys Leu  
 215 220 225  
 Leu Ala Ile Ala Met Val Ala Leu Ile Pro Gly Thr Leu Ile Lys  
 230 235 240  
 Lys Phe Ser Gln Lys His Leu Gln Leu Asn Glu Thr Ser Thr Ala  
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 260

<210> 29  
 <211> 1292  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
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 ggtttccgaa ctgccagctc agaataggaa aataacttgg gatattat 150  
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200  
 tcagagactg ttgatttggt gagacagacc ggccatcagt gtggcatgtc 250  
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300  
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 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550  
 accctttcca gactttgacc cctgggtggac aaacgactgt gaggagaatg 600  
 agtcagagcc cattcctgcc aactgcaact gctgtgcccc gaaacacctg 650  
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 gccaaagtgt ggcgctgctt tcctgagcgg tggttcccat ttcttatccc 850  
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<210> 30

<211> 347

<212> PRT

<213> Homo sapiens

<400> 30

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			20						25					30	
Ser	Glu	Lys	Ala	Ile	Glu	Lys	Phe	Ile	Arg	Gln	Leu	Leu	Glu	Lys	
			35						40					45	
Asn	Glu	Pro	Gln	Arg	Pro	Pro	Pro	Gln	Tyr	Pro	Leu	Leu	Ile	Val	
				50					55					60	
Val	Tyr	Lys	Val	Leu	Ala	Thr	Leu	Gly	Leu	Ile	Leu	Leu	Thr	Ala	
			65						70					75	
Tyr	Phe	Val	Ile	Gln	Pro	Phe	Ser	Pro	Leu	Ala	Pro	Glu	Pro	Val	
				80					85					90	
Leu	Ser	Gly	Ala	His	Thr	Trp	Arg	Ser	Leu	Ile	His	His	Ile	Arg	
				95					100					105	
Leu	Met	Ser	Leu	Pro	Ile	Ala	Lys	Lys	Tyr	Met	Ser	Glu	Asn	Lys	
				110					115					120	
Gly	Val	Pro	Leu	His	Gly	Gly	Asp	Glu	Asp	Arg	Pro	Phe	Pro	Asp	
				125					130					135	
Phe	Asp	Pro	Trp	Trp	Thr	Asn	Asp	Cys	Glu	Gln	Asn	Glu	Ser	Glu	
				140					145					150	
Pro	Ile	Pro	Ala	Asn	Cys	Thr	Gly	Cys	Ala	Gln	Lys	His	Leu	Lys	
				155					160					165	
Val	Met	Leu	Leu	Glu	Asp	Ala	Pro	Arg	Lys	Phe	Glu	Arg	Leu	His	
				170					175					180	
Pro	Leu	Val	Ile	Lys	Thr	Gly	Lys	Pro	Leu	Leu	Glu	Glu	Glu	Ile	
				185					190					195	
Gln	His	Phe	Leu	Cys	Gln	Tyr	Pro	Glu	Ala	Thr	Glu	Gly	Phe	Ser	
				200					205					210	
Glu	Gly	Phe	Phe	Ala	Lys	Trp	Trp	Arg	Cys	Phe	Pro	Glu	Arg	Trp	
				215					220					225	
Phe	Pro	Phe	Pro	Tyr	Pro	Trp	Arg	Arg	Pro	Leu	Asn	Arg	Ser	Gln	
				230					235					240	
Met	Leu	Arg	Glu	Leu	Phe	Pro	Val	Phe	Thr	His	Leu	Pro	Phe	Pro	
				245					250					255	

Lys	Asp	Ala	Ser	Leu	Asn	Lys	Cys	Ser	Phe	Leu	His	Pro	Glu	Pro
				260					265					270
Val	Val	Gly	Ser	Lys	Met	His	Lys	Met	Pro	Asp	Leu	Phe	Ile	Ile
				275					280					285
Gly	Ser	Gly	Glu	Ala	Met	Leu	Gln	Leu	Ile	Pro	Pro	Phe	Gln	Cys
				290					295					300
Arg	Arg	His	Cys	Gln	Ser	Val	Ala	Met	Pro	Ile	Glu	Pro	Gly	Asp
				305					310					315
Ile	Gly	Tyr	Val	Asp	Thr	Thr	His	Trp	Lys	Val	Tyr	Val	Ile	Ala
				320					325					330
Arg	Gly	Val	Gln	Pro	Leu	Val	Ile	Cys	Asp	Gly	Thr	Ala	Phe	Ser
				335					340					345

Glu Leu

<210> 31  
 <211> 478  
 <212> DNA  
 <213> Homo sapiens

<400> 31  
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 gttctcagcc gttcagttgt gatcaaggga cacgtggttt ccgaactgcc 150  
 agctcagaat aggaaaaataa cttgggattt tatattggaa gacatggatc 200  
 ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250  
 ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300  
 aaaaattatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350  
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttgga 400  
 ttaattctgc tcaactgccta cttgtgatt caacctttca gccattagc 450  
 acctgagcca gtgctttgtg gagctcac 478

<210> 32  
 <211> 3531  
 <212> DNA  
 <213> Homo sapiens

<400> 32  
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 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150  
 tgccatgatg ccgctggggc tgcagtgggg actgccctcc ctgccacca 200  
 ccaatggcag cccacacctc tttgaagact tccaggtttt ttgtgccaca 250

cccgaatggc gccacttcat cgacaaacag gtacagccaa ccatgtccca 300  
 gttcgaaatg gacacgtatg ctaagagcca cgaccttatg tcagggtttct 350  
 ggaatgcctg ctatgacatg cttatgagca gtgggcagcg gcgccagtgg 400  
 gagcgcgccc agagtctgctg ggccctccag gagctggtgc tggaaacctgc 450  
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 cgccagctcg ccagcccatg tggggcctgg gcgctgaggg acactcccat 600  
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 agctggtgcc caaccatcac ttcgaccctc acctggaagc cagcgctctc 700  
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 catccccccc catacccagg tacggaacca ggtgtactcg tggctcctgc 1250  
 gcctacggcc cccctctcaa ggctaccta gcagccgctc cccccaggag 1300  
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 atgacctgtc tcagtacct gtgttcccct ggttctcgca ggactacgtg 1450  
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 cttcctggag aaccagaacg gttttgacct gggtgtctc cagctgacca 1850



acgagaaggt aggcgatgtg gtgctacccc cgtgggccag ctctcctgag 1900  
 gacttcatcc agcagcaccc ccaggctctg gagtcggagt atgtgtctgc 1950  
 acacctacac gagtggatcg acctcatctt tggctacaag cagcgggggc 2000  
 cagccgccga ggaggccctc aatgtcttct attactgcac ctatgagggg 2050  
 gctgtagacc tggaccatgt gacagatgag cgggaacgga aggctctgga 2100  
 gggcattatc agcaactttg ggcagactcc ctgtcagctg ctgaaggagc 2150  
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 ctggacacta actcacctag catcttcag cactggacg aactcaaggc 2250  
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 gacccccaca tgggcagcca caagacgcag cgactgtgta gtggcccggt 2400  
 ggtgccaggc agtgggtgtga gtggacaagc actggcagtg gccccgggat 2450  
 gaaagctgct attcagcgtt ggccactggg atggcagcct gcgggtgact 2500  
 gcactacccc gtggcaagct gttgagccag ctgagctgcc accttgatgt 2550  
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 ggtgacagag gaacttttgt tgctgggcac cgccagtgcc gccctgcaca 3050  
 tctccaact aaacacactg ctcccgccgc cgctccctt gccatgaag 3100  
 gtggccatcc gcagcgtggc cgtgaccaag gagcgagcc acgtgtcgtt 3150  
 gggcctggag gatggcaagc tcactgtgtt ggtcgcgggg cagccctctg 3200  
 aggtgcgcag cagccagttc gcgcggaagc tgtggcggtc ctgcggcgcc 3250  
 atctcccagg tgtcctcggg agagacggaa tacaacccta ctgaggcgcg 3300  
 ctgaacctgg ccagtccggc tgctcggggc ccgcccccg caggcctggc 3350  
 ccgggaggcc ccgcccagaa gtcgcgggga acaccccggg gtgggcagcc 3400  
 caggggggtga gcgggggcca cctgcccag ctcagggtatt ggcgggggat 3450

gttacccct cagggattgg cgggcggaag tcccgccct cgccggtga 3500  
 ggggccgcc tgaggccag cactggcgc t 3531

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 <211> 1003  
 <212> PRT  
 <213> Homo sapiens

<400> 33  
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 1 5 10 15  
 Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser  
 20 25 30  
 Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe  
 35 40 45  
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu  
 50 55 60  
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His  
 65 70 75  
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala  
 80 85 90  
 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg  
 95 100 105  
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys  
 110 115 120  
 Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala  
 125 130 135  
 Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu  
 140 145 150  
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr  
 155 160 165  
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu  
 170 175 180  
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln  
 185 190 195  
 Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val  
 200 205 210  
 Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val  
 215 220 225  
 Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly  
 230 235 240  
 Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val  
 245 250 255  
 His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe  
 260 265 270

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	275	280	285
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	290	295	300
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	305	310	315
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	320	325	330
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	335	340	345
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	350	355	360
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	365	370	375
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	380	385	390
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	395	400	405
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	410	415	420
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	425	430	435
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	440	445	450
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	455	460	465
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	470	475	480
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	485	490	495
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	500	505	510
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	515	520	525
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	530	535	540
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	545	550	555
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	560	565	570
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	575	580	585

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys	
				590					595					600	
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln	
				605					610					615	
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala	
				620					625					630	
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe	
				635					640					645	
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val	
				650					655					660	
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp	
				665					670					675	
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met	
				680					685					690	
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro	
				695					700					705	
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly	
				710					715					720	
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val	
				725					730					735	
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His	
				740					745					750	
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr	
				755					760					765	
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu	
				770					775					780	
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	
				785					790					795	
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	
				800					805					810	
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	
				815					820					825	
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	
				830					835					840	
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	
				845					850					855	
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	
				860					865					870	
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	
				875					880					885	
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	
				890					895					900	

Ala Leu Thr Val Thr Glu Asp Phe Val Leu Leu Gly Thr Ala Gln  
905 910 915

Cys Ala Leu His Ile Leu Gln Leu Asn Thr Leu Leu Pro Ala Ala  
920 925 930

Pro Pro Leu Pro Met Lys Val Ala Ile Arg Ser Val Ala Val Thr  
935 940 945

Lys Glu Arg Ser His Val Leu Val Gly Leu Glu Asp Gly Lys Leu  
950 955 960

Ile Val Val Val Ala Gly Gln Pro Ser Glu Val Arg Ser Ser Gln  
965 970 975

Phe Ala Arg Lys Leu Trp Arg Ser Ser Arg Arg Ile Ser Gln Val  
980 985 990

Ser Ser Gly Glu Thr Glu Tyr Asn Pro Thr Glu Ala Arg  
995 1000

<210> 34  
<211> 43  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 34  
tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35  
<211> 1395  
<212> DNA  
<213> Homo sapiens

<400> 35  
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atcatgcaac cccacggccc acctgtgaa ctctcgtgac ccagggtgta 100  
tgtgctgtt ccagggtgac tcatccaaag gcctaatacca acgttctgtc 150  
ttcaatctgc aaatctatgg ggtctctggg ctcttctgga cccttaactg 200  
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cctcatcctg accttctgac agatagcccg ggtatcttg gagtatattg 400  
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 agccttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950  
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 cccaccgtcc agccatccaa cctcacttcg ccttacaggt ctccattttg 1050  
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 aaacaaacaa acaaaaagat tttattaaag atattttgtt aactc 1395

<210> 36

<211> 321

<212> PRT

<213> Homo sapiens

<400> 36

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				20					25					30
Pro	Gly	Leu	Met	Cys	Val	Phe	Gln	Gly	Tyr	Ser	Ser	Lys	Gly	Leu
				35					40					45
Ile	Gln	Arg	Ser	Val	Phe	Asn	Leu	Gln	Ile	Tyr	Gly	Val	Leu	Gly
				50					55					60
Leu	Phe	Trp	Thr	Leu	Asn	Trp	Val	Leu	Ala	Leu	Gly	Gln	Cys	Val
				65					70					75
Leu	Ala	Gly	Ala	Phe	Ala	Ser	Phe	Tyr	Trp	Ala	Phe	His	Lys	Pro
				80					85					90
Gln	Asp	Ile	Pro	Thr	Phe	Pro	Leu	Ile	Ser	Ala	Phe	Ile	Arg	Thr
				95					100					105
Leu	Arg	Tyr	His	Thr	Gly	Ser	Leu	Ala	Phe	Gly	Ala	Leu	Ile	Leu
				110					115					120
Thr	Leu	Val	Gln	Ile	Ala	Arg	Val	Ile	Leu	Glu	Tyr	Ile	Asp	His
				125					130					135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys
				140					145					150
Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe
				155					160					165
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn
				170					175					180
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn
				185					190					195
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu
				200					205					210
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser
				215					220					225
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe
				230					235					240
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser
				245					250					255
Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe
				260					265					270
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu
				275					280					285
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys
				290					295					300
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp
				305					310					315
Asn	Lys	Lys	Arg	Lys	Lys									
				320										

<210> 37  
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 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 37  
 tcgtgccag gggctgatgt gc 22

<210> 38  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 38  
 gtcctttacc agccccgga tgcg 24

<210> 39  
 <211> 50

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

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ggcctaatacc aacgttctgt cttcaatctg caaatctatg gggctctggg 50

<210> 40  
<211> 1365  
<212> DNA  
<213> Homo sapiens

<400> 40  
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aggtggtcca gagccagagg gtccttctct tcgtggcctc ggaagtggat 150  
gtctctgtgt cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200  
gcaatatacg ctggttcag tttctgggtg gcaagaactt gaaactgcac 250  
ttcttgagca taaagaacag ttctattatt ttattctcat aaactgtgga 300  
gctaattgtg acctattgga tattcttcaa cctgatgaag acatatatatt 350  
ctttgtgtgt gactccata ggccagtcga tgcgtcaat gtatacaacg 400  
ataccagat caaattactc attaaacaag atgatgacct tgaagtctcc 450  
gcctatgaag acatcttcag gcatgaagag gaggatgaag agcattcagg 500  
aaatgacagt gatgggtcag agccttctga gaagcgaca cggttagaag 550  
aggagatagt ggagcaaac atgcggagga ggcagcggcg agagtggag 600  
gcccggagaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650  
gacatcgtca gccatggtga tgtttgagct ggcttggatg ctgtccaagg 700  
acctgaatga catgctgtgg tgggccatcg ttgactaac agaccagtgg 750  
gtgcaagaca agatcactca aatgaaatac gtgactgatg ttgggtgctc 800  
gcagcgccac gtttccgcc acaaccaccg gaacaggat gaggagaaca 850  
cactctcgt ggaactgaca cggatctcct ttgagtatga cctccgcctg 900  
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gcattcattt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200



gccaccatgt ctttgatgga gagccccgag aaggatggct cagggacaga 1250  
 tcacttcac caggctctgg acagcctctc caggagtaac ctggacaagc 1300  
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 accattgcca gctgc 1365

<210> 41  
 <211> 566  
 <212> PRT  
 <213> Homo sapiens

<400> 41  
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 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu  
 20 25 30  
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val  
 35 40 45  
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr  
 50 55 60  
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile  
 65 70 75  
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp  
 80 85 90  
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn  
 95 100 105  
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys  
 110 115 120  
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg  
 125 130 135  
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly  
 140 145 150  
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val  
 155 160 165  
 Glu Gln Thr Met Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg  
 170 175 180  
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly  
 185 190 195  
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser  
 200 205 210  
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr  
 215 220 225  
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr  
 230 235 240  
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

	245		250		255
Asn Glu Asp Glu Glu Asn Thr Leu Ser	Val Asp Cys Thr Arg Ile				
260	265	270			
Ser Phe Glu Tyr Asp Leu Arg Leu Val	Leu Tyr Gln His Trp Ser				
275	280	285			
Leu His Asp Ser Leu Cys Asn Thr Ser	Tyr Thr Ala Ala Arg Phe				
290	295	300			
Lys Leu Trp Ser Val His Gly Gln Lys	Arg Leu Gln Glu Phe Leu				
305	310	315			
Ala Asp Met Gly Leu Pro Leu Lys Gln	Val Lys Gln Lys Phe Gln				
320	325	330			
Ala Met Asp Ile Ser Leu Lys Glu Asn	Leu Arg Glu Met Ile Glu				
335	340	345			
Glu Ser Ala Asn Lys Phe Gly Met Lys	Asp Met Arg Val Gln Thr				
350	355	360			
Phe Ser Ile His Phe Gly Phe Lys His	Lys Phe Leu Ala Ser Asp				
365	370	375			
Val Val Phe Ala Thr Met Ser Leu Met	Glu Ser Pro Glu Lys Asp				
380	385	390			
Gly Ser Gly Thr Asp His Phe Ile Gln	Ala Leu Asp Ser Leu Ser				
395	400	405			
Arg Ser Asn Leu Asp Lys Leu Tyr His	Gly Leu Glu Leu Ala Lys				
410	415	420			
Lys Gln Leu Arg Ala Thr Gln Gln Thr	Ile Ala Ser Cys Leu Cys				
425	430	435			
Thr Asn Leu Val Ile Ser Gln Gly Pro	Phe Leu Tyr Cys Ser Leu				
440	445	450			
Met Glu Gly Thr Pro Asp Val Met Leu	Phe Ser Arg Pro Ala Ser				
455	460	465			
Leu Ser Leu Leu Ser Lys His Leu Leu	Lys Ser Phe Val Cys Ser				
470	475	480			
Thr Lys Asn Arg Arg Cys Lys Leu Leu	Pro Leu Val Met Ala Ala				
485	490	495			
Pro Leu Ser Met Glu His Gly Thr Val	Thr Val Val Gly Ile Pro				
500	505	510			
Pro Glu Thr Asp Ser Ser Asp Arg Lys	Asn Phe Phe Gly Arg Ala				
515	520	525			
Phe Glu Lys Ala Ala Glu Ser Thr Ser	Ser Arg Met Leu His Asn				
530	535	540			
His Phe Asp Leu Ser Val Ile Glu Leu	Lys Ala Glu Asp Arg Ser				
545	550	555			
Lys Phe Leu Asp Ala Leu Ile Ser Leu Leu Ser					

<210> 42  
<211> 380  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 44, 118, 172, 183  
<223> unknown base

<400> 42  
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cggatttcgg caaagagtto tacgaggtgg tccagagcca gagggctcctt 100  
ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150  
ggccttggtc cagtgtgacc angtgcaata tangctggtt ccagtttctg 200  
ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250  
tattttattc tcataaaact tggagctaata gtagacctat tggatattct 300  
tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350  
tcaatgttgt caatgtatac aacgataccc 380

<210> 43  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 43  
ttccgcaaag agttctacga ggtgg 25

<210> 44  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 44  
attgacaaca ttgactggcc tatggg 26

<210> 45  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 45  
gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgtga 50

<210> 46

<211> 3089  
 <212> DNA  
 <213> Homo sapiens

<400> 46  
 caggaaacct ctctttgggt ctggattggg acccctttcc agtaccattt 50  
 tttctagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100  
 ggaaatagac tacagcccca attggctgac ttggctata gaaaaaagaa 150  
 aggaacgaaa agagacagtt ttttttgaa agctaagtct tccctttatc 200  
 gagtcaagaa accccccctt cttgagctat ttacagcttt taacaattga 250  
 gtaaagtacg ctccggtcac catggtgaca gccgccctgg gtcccgctcg 300  
 ggcagcgctc ctgctcttcc tctgatgtg tgagatccgt atggtggagc 350  
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 gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggccg 450  
 cccccacgcc ctgcctgaga tcagacccta cattaatatc accatcctga 500  
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 aggggagggt cccaagggga gcctggccct caggggcagca agggtgacaa 600  
 gggggagatg ggcagccccc gcgcccgtg ccagaagcgc ttcttcgcct 650  
 tctcagtggg ccgcaagacg gccctgcaca gcggcgagga ctccagacg 700  
 ctgctcttcg aaagggtctt tgtgaacctt gatgggtgct ttgacatggc 750  
 gaccggccag ttgtctgctc cctgcgtgg catctacttc ttacgcctca 800  
 atgtgcacag ctggaattac aaggagacgt acgtgcacat tatgcataac 850  
 cagaaagagg ctgtcatcct gtacgcgcag cccagcgagc gcagcatcat 900  
 gcagagccag agtgtgatgc tggacctggc ctacggggac cgcgtctggg 950  
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 gacacctaca tcaccttcag cggccacctc atcaaggccg aggacgactg 1050  
 agggcctctg ggccaccctc ccggctggag agctcagggt ctggctccgt 1100  
 cccctgcagg gctcagttg cactgctgtg aagcaggaag gccagggagg 1150  
 tccccgggga cctggcattc tggggagacc ctgcttctat ctggctgcc 1200  
 atcatccctc ccagcctatt tctgctctc tcttctctct tggacctatt 1250  
 ttaagaagct tgctaacct aatattctag aactttccca gcctcgtagc 1300  
 ccagcacttc tcaaaacttg aaatgcatgc gaatcaccgc ggggttcgtg 1350  
 taaatgcaga ttctgactca gcaggtctga gtgggtccag gattctgtgt 1400  
 ttctcatatg ttctgggtg atgctgatgg ggtcagttca tgaaccaaac 1450

tggagcaacc aggttctag agttttctcaa tattctagta ctttctgaac 1500  
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taaagaatgc tgtctcctct tggaaaaaaa aaaaaaaaa 3089

<210> 47  
<211> 259  
<212> PRT  
<213> Homo sapiens

<220>  
<221> Signal Peptide  
<222> 1-20  
<223> Signal Peptide

<220>  
<221> N-glycosylation Site  
<222> 72-75  
<223> N-glycosylation Site

<220>  
<221> Clq Domain Proteins  
<222> 144-176, 78-111, 84-117  
<223> Clq Domain Proteins

<400> 47  
Met Val Thr Ala Ala Leu Gly Pro Val Trp Ala Ala Leu Leu Leu  
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Phe Leu Leu Met Cys Glu Ile Arg Met Val Glu Leu Thr Phe Asp  
20 25 30  
Arg Ala Val Ala Ser Gly Cys Gln Arg Cys Cys Asp Ser Glu Asp  
35 40 45  
Pro Leu Asp Pro Ala His Val Ser Ser Ala Ser Ser Ser Gly Arg  
50 55 60  
Pro His Ala Leu Pro Glu Ile Arg Pro Tyr Ile Asn Ile Thr Ile  
65 70 75  
Leu Lys Gly Asp Lys Gly Asp Pro Gly Pro Met Gly Leu Pro Gly  
80 85 90  
Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu Pro Gly Pro Gln Gly  
95 100 105  
Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro Gly Ala Pro Cys  
110 115 120  
Gln Lys Arg Phe Phe Ala Phe Ser Val Gly Arg Lys Thr Ala Leu  
125 130 135  
His Ser Gly Glu Asp Phe Gln Thr Leu Leu Phe Glu Arg Val Phe  
140 145 150  
Val Asn Leu Asp Gly Cys Phe Asp Met Ala Thr Gly Gln Phe Ala  
155 160 165  
Ala Pro Leu Arg Gly Ile Tyr Phe Phe Ser Leu Asn Val His Ser  
170 175 180  
Trp Asn Tyr Lys Glu Thr Tyr Val His Ile Met His Asn Gln Lys  
185 190 195  
Glu Ala Val Ile Leu Tyr Ala Gln Pro Ser Glu Arg Ser Ile Met

	200	205	210
Gln Ser Gln Ser Val Met Leu Asp Leu Ala Tyr Gly Asp Arg Val			
	215	220	225
Trp Val Arg Leu Phe Lys Arg Gln Arg Glu Asn Ala Ile Tyr Ser			
	230	235	240
Asn Asp Phe Asp Thr Tyr Ile Thr Phe Ser Gly His Leu Ile Lys			
	245	250	255
Ala Glu Asp Asp			

<210> 48  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 48  
 ccagacgctg ctcttcgaaa gggtc 25

<210> 49  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 49  
 ggtccccgta ggccaggctc agc 23

<210> 50  
 <211> 50  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 50  
 ctacttcttc agcctcaatg tgcacagctg gaattacaag gagacgtacg 50

<210> 51  
 <211> 2768  
 <212> DNA  
 <213> Homo sapiens

<400> 51  
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 ccgcctcccg ggacagaaga tgtgtccag ggtccctctg ctgtgcgcg 150  
 tgctctgct actggccctg gggcctgggg tgcagggtcg cccatccggc 200  
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 cgccgacttt ggtgcccag ccaccaccac cacagccaca gtgccacca 1200  
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 ccaaccacgc ccagtcacc caggcccgcg agggcaacct gccgtcctc 1850



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 aaggtccct tggagccagg cccgaaggca acagagggcg gtggagaggc 2050  
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 aaaagatgaa gttgtaaa 2768

<210> 52

<211> 673

<212> PRT

<213> Homo sapiens

<400> 52

Met	Cys	Ser	Arg	Val	Pro	Leu	Leu	Leu	Pro	Leu	Leu	Leu	Leu	Leu	15
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Ala	Leu	Gly	Pro	Gly	Val	Gln	Gly	Cys	Pro	Ser	Gly	Cys	Gln	Cys	30
				20					25						
Ser	Gln	Pro	Gln	Thr	Val	Phe	Cys	Thr	Ala	Arg	Gln	Gly	Thr	Thr	45
				35					40						
Val	Pro	Arg	Asp	Val	Pro	Pro	Asp	Thr	Val	Gly	Leu	Tyr	Val	Phe	60
				50					55						
Glu	Asn	Gly	Ile	Thr	Met	Leu	Asp	Ala	Gly	Ser	Phe	Ala	Gly	Leu	75
				65					70						
Pro	Gly	Leu	Gln	Leu	Leu	Asp	Leu	Ser	Gln	Asn	Gln	Ile	Ala	Ser	90
				80					85						
Leu	Pro	Ser	Gly	Val	Phe	Gln	Pro	Leu	Ala	Asn	Leu	Ser	Asn	Leu	

	95		100		105
Asp Leu Thr Ala	Asn Arg Leu His Glu	Ile Thr Asn Glu Thr	Phe		
	110		115		120
Arg Gly Leu Arg	Arg Leu Glu Arg Leu	Tyr Leu Gly Lys Asn	Arg		
	125		130		135
Ile Arg His Ile	Gln Pro Gly Ala Phe	Asp Thr Leu Asp Arg	Leu		
	140		145		150
Leu Glu Leu Lys	Leu Gln Asp Asn Glu	Leu Arg Ala Leu Pro	Pro		
	155		160		165
Leu Arg Leu Pro	Arg Leu Leu Leu Leu	Asp Leu Ser His Asn	Ser		
	170		175		180
Leu Leu Ala Leu	Glu Pro Gly Ile Leu	Asp Thr Ala Asn Val	Glu		
	185		190		195
Ala Leu Arg Leu	Ala Gly Leu Gly Leu	Gln Leu Asp Glu Gly			
	200		205		210
Leu Phe Ser Arg	Leu Arg Asn Leu His	Asp Leu Asp Val Ser	Asp		
	215		220		225
Asn Gln Leu Glu	Arg Val Pro Pro Val	Ile Arg Gly Leu Arg	Gly		
	230		235		240
Leu Thr Arg Leu	Arg Leu Ala Gly Asn	Thr Arg Ile Ala Gln	Leu		
	245		250		255
Arg Pro Glu Asp	Leu Ala Gly Leu Ala	Ala Leu Gln Glu Leu	Asp		
	260		265		270
Val Ser Asn Leu	Ser Leu Gln Ala Leu	Pro Gly Asp Leu Ser	Gly		
	275		280		285
Leu Phe Pro Arg	Leu Arg Leu Leu Ala	Ala Ala Arg Asn Pro	Phe		
	290		295		300
Asn Cys Val Cys	Pro Leu Ser Trp Phe	Gly Pro Trp Val Arg	Glu		
	305		310		315
Ser His Val Thr	Leu Ala Ser Pro Glu	Glu Thr Arg Cys His	Phe		
	320		325		330
Pro Pro Lys Asn	Ala Gly Arg Leu Leu	Leu Glu Leu Asp Tyr	Ala		
	335		340		345
Asp Phe Gly Cys	Pro Ala Thr Thr Thr	Thr Ala Thr Val Pro	Thr		
	350		355		360
Thr Arg Pro Val	Val Arg Glu Pro Thr	Ala Leu Ser Ser Ser	Leu		
	365		370		375
Ala Pro Thr Trp	Leu Ser Pro Thr Ala	Pro Ala Thr Glu Ala	Pro		
	380		385		390
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Pro Gln Asp Cys	Pro Pro Ser Thr Cys	Leu Asn Gly Gly Thr	Cys		

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Pro Ser Pro Thr Pro	Val Thr Pro Arg Pro	Pro Arg Ser Leu Thr
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Gln Arg Tyr Leu Gln	Gly Ser Ser Val Gln	Leu Arg Ser Leu Arg
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Pro Pro Ala Val His	Ser Asn His Ala Pro	Val Thr Gln Ala Arg
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Glu Gly Asn Leu Pro	Leu Leu Ile Ala Pro	Ala Leu Ala Ala Val
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<211> 811

<212> PRT

<213> Homo sapiens

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			50						55					60
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			65						70					75
Val	Leu	Ile	Leu	Cys	His	Asn	Arg	Ile	Gln	Gln	Leu	Asp	Leu	Lys
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Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu		155	160	165
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Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile		185	190	195
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Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser		260	265	270
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala		275	280	285
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg		290	295	300
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln		305	310	315
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn		320	325	330
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn		335	340	345
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu		350	355	360
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys		365	370	375
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val		380	385	390
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser		395	400	405

Gln	Asn	Leu	Leu	Gln	His	Lys	Asn	Asp	Glu	Asn	Cys	Ser	Trp	Pro	
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Glu	Thr	Val	Val	Asn	Met	Asn	Leu	Ser	Tyr	Asn	Lys	Leu	Ser	Asp	
				425					430					435	
Ser	Val	Phe	Arg	Cys	Leu	Pro	Lys	Ser	Ile	Gln	Ile	Leu	Asp	Leu	
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Asn	Asn	Asn	Gln	Ile	Gln	Thr	Val	Pro	Lys	Glu	Thr	Ile	His	Leu	
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Met	Ala	Leu	Arg	Glu	Leu	Asn	Ile	Ala	Phe	Asn	Phe	Leu	Thr	Asp	
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Leu	Pro	Gly	Cys	Ser	His	Phe	Ser	Arg	Leu	Ser	Val	Leu	Asn	Ile	
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Cys	Gln	Glu	Val	Lys	Thr	Leu	Asn	Ala	Gly	Arg	Asn	Pro	Phe	Arg	
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Cys	Thr	Cys	Glu	Leu	Lys	Asn	Phe	Ile	Gln	Leu	Glu	Thr	Tyr	Ser	
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Glu	Val	Met	Met	Val	Gly	Trp	Ser	Asp	Ser	Tyr	Thr	Cys	Glu	Tyr	
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Pro	Leu	Asn	Leu	Arg	Gly	Thr	Arg	Leu	Lys	Asp	Val	His	Leu	His	
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Phe	Asp	Leu	Pro	Trp	Tyr	Leu	Arg	Met	Leu	Gly	Gln	Cys	Thr	Gln	
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Thr	Trp	His	Arg	Val	Arg	Lys	Thr	Thr	Gln	Glu	Gln	Leu	Lys	Arg	
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Asn	Val	Arg	Phe	His	Ala	Phe	Ile	Ser	Tyr	Ser	Glu	His	Asp	Ser	
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Gly	Ser	Ile	Leu	Ile	Cys	Leu	Tyr	Glu	Ser	Tyr	Phe	Asp	Pro	Gly	
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Lys	Ser	Ile	Ser	Glu	Asn	Ile	Val	Ser	Phe	Ile	Glu	Lys	Ser	Tyr	
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Lys	Ser	Ile	Phe	Val	Leu	Ser	Pro	Asn	Phe	Val	Gln	Asn	Glu	Trp	
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 20 25 30  
 Glu Asp Pro Asp Tyr Tyr Gly Gln Glu Ile Trp Ser Arg Glu Pro  
 35 40 45  
 Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro  
 50 55 60  
 Leu Pro Ala Gly Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu  
 65 70 75  
 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys  
 80 85 90  
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Gly Lys His Ser  
 95 100 105  
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn  
 110 115 120  
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser  
 125 130 135  
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln  
 140 145 150  
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg  
 155 160 165  
 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr  
 170 175 180  
 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

185	190	195
Glu Val Asp Ala Arg Arg Leu Thr Arg	Phe Thr Gly Val Ile Thr	
200	205	210
Gln Gly Arg Asn Ser Leu Trp Leu Ser	Asp Trp Val Thr Ser Tyr	
215	220	225
Lys Val Met Val Ser Asn Asp Ser His	Thr Trp Val Thr Val Lys	
230	235	240
Asn Gly Ser Gly Asp Met Ile Phe Glu	Gly Asn Ser Glu Lys Glu	
245	250	255
Ile Pro Val Leu Asn Glu Leu Pro Val	Pro Met Val Ala Arg Tyr	
260	265	270
Ile Arg Ile Asn Pro Gln Ser Trp Phe	Asp Asn Gly Ser Ile Cys	
275	280	285
Met Arg Met Glu Ile Leu Gly Cys Pro	Leu Pro Asp Pro Asn Asn	
290	295	300
Tyr Tyr His Arg Arg Asn Glu Met Thr	Thr Thr Asp Asp Leu Asp	
305	310	315
Phe Lys His His Asn Tyr Lys Glu Met	Arg Gln Leu Met Lys Val	
320	325	330
Val Asn Glu Met Cys Pro Asn Ile Thr	Arg Ile Tyr Asn Ile Gly	
335	340	345
Lys Ser His Gln Gly Leu Lys Leu Tyr	Ala Val Glu Ile Ser Asp	
350	355	360
His Pro Gly Glu His Glu Val Gly Glu	Pro Glu Phe His Tyr Ile	
365	370	375
Ala Gly Ala His Gly Asn Glu Val Leu	Gly Arg Glu Leu Leu Leu	
380	385	390
Leu Leu Val Gln Phe Val Cys Gln Glu	Tyr Leu Ala Arg Asn Ala	
395	400	405
Arg Ile Val His Leu Val Glu Glu Thr	Arg Ile His Val Leu Pro	
410	415	420
Ser Leu Asn Pro Asp Gly Tyr Glu Lys	Ala Tyr Glu Gly Gly Ser	
425	430	435
Glu Leu Gly Gly Trp Ser Leu Gly Arg	Trp Thr His Asp Gly Ile	
440	445	450
Asp Ile Asn Asn Asn Phe Pro Asp Leu	Asn Thr Leu Leu Trp Glu	
455	460	465
Ala Glu Asp Arg Gln Asn Val Pro Arg	Lys Val Pro Asn His Tyr	
470	475	480
Ile Ala Ile Pro Glu Trp Phe Leu Ser	Glu Asn Ala Thr Val Ala	
485	490	495
Ala Glu Thr Arg Ala Val Ile Ala Trp	Met Glu Lys Ile Pro Phe	

500	505	510
Val Leu Gly Gly 515	Asn Leu Gln Gly Gly 520	Glu Leu Val Val Ala Tyr 525
Pro Tyr Asp Leu Val 530	Arg Ser Pro Trp Lys 535	Thr Gln Glu His Thr 540
Pro Thr Pro Asp 545	Asp His Val Phe Arg Trp 550	Leu Ala Tyr Ser Tyr 555
Ala Ser Thr His 560	Arg Leu Met Thr Asp 565	Ala Arg Arg Val Cys 570
His Thr Glu Asp 575	Phe Gln Lys Glu Glu Gly 580	Thr Val Asn Gly Ala 585
Ser Trp His Thr 590	Val Ala Gly Ser Leu Asn 595	Asp Phe Ser Tyr Leu 600
His Thr Asn Cys 605	Phe Glu Leu Ser Ile Tyr 610	Val Gly Cys Asp Lys 615
Tyr Pro His Glu 620	Ser Gln Leu Pro Glu Glu 625	Trp Glu Asn Asn Arg 630
Glu Ser Leu Ile 635	Val Phe Met Glu Gln Val 640	His Arg Gly Ile Lys 645
Gly Leu Val Arg 650	Asp Ser His Gly Lys Gly 655	Ile Pro Asn Ala Ile 660
Ile Ser Val Glu 665	Gly Ile Asn His Asp Ile 670	Arg Thr Ala Asn Asp 675
Gly Asp Tyr Trp 680	Arg Leu Leu Asn Pro Gly 685	Glu Tyr Val Val Thr 690
Ala Lys Ala Glu 695	Gly Phe Thr Ala Ser Thr 700	Lys Asn Cys Met Val 705
Gly Tyr Asp Met 710	Gly Ala Thr Arg Cys Asp 715	Phe Thr Leu Ser Lys 720
Thr Asn Met Ala 725	Arg Ile Arg Glu Ile Met 730	Glu Lys Phe Gly Lys 735
Gln Pro Val Ser 740	Leu Pro Ala Arg Arg Leu 745	Lys Leu Arg Gly Arg 750
Lys Arg Arg Gln 755	Arg Gly	

<210> 63

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 63

gttctcaatg agctaccggt cccc 24

<210> 64  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 64  
cgcgatgtag tggaaactcg gctc 24

<210> 65  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 65  
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<210> 66  
<211> 2854  
<212> DNA  
<213> Homo sapiens

<400> 66  
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tcttccttgg ccaagctgca ggggatttgg gggatgtggg acctccaatt 100  
cccagccccg gcttcagctc ttccocaggt gttgactcca gctocagctt 150  
cagctccagc tccaggtegg gctccagctc cagccgcagc ttaggcagcg 200  
gagggttctgt gtccagtttg ttttccaatt tcaccggctc cgtggatgac 250  
cgtgggacct gccagtgtc tgtttccctg ccagacacca cctttcccg 300  
ggacagagtg gaacgcttgg aattcacagc tcatgttctt tctcagaagt 350  
ttgagaaaaga actttctaaa gtgagggaat atgtccaatt aattagtgtg 400  
tatgaaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450  
ggataaccatt tcttacctg aactggactt cgagctgac aaggtagaag 500  
tgaaggagat ggaaaaactg gtcatacagc tgaaggagag ttttggtgga 550  
agctcagaaa ttgttgacca gctggagggt gagataagaa atatgactct 600  
cttggtagag aagcttgaga cactagacaa aaacaatgtc cttgccattc 650  
gccgagaaat cgtggctctg aagaccaagc tgaagagtg tgaggcctct 700  
aaagatcaaa acaccctgt cgtccaccct cctccactc caggggagctg 750  
tggtcatggt ggtgtggtga acatcagcaa accgtctgtg gttcagctca 800  
actggagagg gttttcttat ctatattggt cttggggtag ggattactct 850  
cccagcatc caaacaagg actgtattgg gtggcgccat tgaatacaga 900

tgggagactg ttggagtatt atagactgta caacacactg gatgatttgc 950  
 tattgtatat aaatgctoga gaggttcgga tcacctatgg ccaaggtagt 1000  
 ggtacagcag tttaacaaca caacatgtac gtcaacatgt acaacaccgg 1050  
 gaatatgtcc agagttaacc tgaccaccaa cagcattgtc gtgactcaaa 1100  
 ctctccctaa tgcgcctat aataaccgct tttcatatgc taatgttgc 1150  
 tggcaagata ttgactttgc tgtggatgag aatggattgt gggttattta 1200  
 ttcaactgaa gccagcactg gtaacatggt gattagtaaa ctcaatgaca 1250  
 ccacacttca ggtgctaaac acttggtata ccaagcagta taaacctct 1300  
 gcttctaacg ccttcattgt atgtgggggt ctgtatgcca cccgtactat 1350  
 gaacaccaga acagaagaga ttttttacta ttatgacaca aacacagggg 1400  
 aagagggcaa actagacatt gtaatgcata agatgcagga aaaagtgcag 1450  
 agcattaact ataacccttt tgaccagaaa ctttatgtct ataacgatgg 1500  
 ttaccttctg aattatgac tttctgtctt gcagaagccc cagtaagctg 1550  
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 ccacttactt agatatctgc aggggtgtct aaaagtgtgt tcattttgca 1650  
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 ggaattaagg aacttaaaac tcagtatggc gtctagggat tctttgtaca 1900  
 ggaaatattg cccaatgact agtcctcacc catgtagcac cactaattct 1950  
 tccatgcctg gaagaaacct ggggacttag ttaggtagat taatatctgg 2000  
 agctcctoga gggaccaaat ctccaacttt ttttccct cactagcaac 2050  
 tggaatgatg ctttgtatgt ggcagataag taaatttggc atgcttatat 2100  
 attctacacc tgtaaagtgc tgagttttat ggagagaggg ctttttatgc 2150  
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 cctgcttttt cttttctctc attgtccacc ttactaaaag tcagtagaat 2250  
 cttctacacc ataacttctt tccaaaggca gctcagaaga ttagaaccag 2300  
 acttactaac caattccacc cccacacaac ccccttctac tgctactttt 2350  
 aaaaaaat 2400  
 atagttttct atgggaactga tctaagatta gaaaaattaa 2400  
 ttttctttaa tttcattatg gacttttatt tacatgactc taagactata 2450  
 agaaaaatctg atggcagtgaa caaagtgcata gcattttatt ttatctaata 2500



aagaccttgg agcatatgtg caacttatga gtgtatcagt tgttgcattg 2550  
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 aaaataaatg attaaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850  
 aaaa 2854

<210> 67  
 <211> 510  
 <212> PRT  
 <213> Homo sapiens

<400> 67  
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 Gly Gln Ala Ala Gly Asp Leu Gly Asp Val Gly Pro Pro Ile Pro  
 20 25 30  
 Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser  
 35 40 45  
 Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu  
 50 55 60  
 Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly  
 65 70 75  
 Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro  
 80 85 90  
 Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr  
 95 100 105  
 Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val  
 110 115 120  
 Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu  
 125 130 135  
 Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser  
 140 145 150  
 Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu  
 155 160 165  
 Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser  
 170 175 180  
 Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr  
 185 190 195  
 Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu  
 200 205 210

Ala Ile Arg Arg	Glu Ile Val Ala Leu	Lys Thr Lys Leu Lys	Glu
	215	220	225
Cys Glu Ala Ser	Lys Asp Gln Asn Thr	Pro Val Val His Pro	Pro
	230	235	240
Pro Thr Pro Gly	Ser Cys Gly His Gly	Gly Val Val Asn Ile	Ser
	245	250	255
Lys Pro Ser Val	Val Gln Leu Asn Trp	Arg Gly Phe Ser Tyr	Leu
	260	265	270
Tyr Gly Ala Trp	Gly Arg Asp Tyr Ser	Pro Gln His Pro Asn	Lys
	275	280	285
Gly Leu Tyr Trp	Val Ala Pro Leu Asn	Thr Asp Gly Arg Leu	Leu
	290	295	300
Glu Tyr Tyr Arg	Leu Tyr Asn Thr Leu	Asp Asp Leu Leu Leu	Tyr
	305	310	315
Ile Asn Ala Arg	Glu Leu Arg Ile Thr	Tyr Gly Gln Gly Ser	Gly
	320	325	330
Thr Ala Val Tyr	Asn Asn Asn Met Tyr	Val Asn Met Tyr Asn	Thr
	335	340	345
Gly Asn Ile Ala	Arg Val Asn Leu Thr	Thr Asn Thr Ile Ala	Val
	350	355	360
Thr Gln Thr Leu	Pro Asn Ala Ala Tyr	Asn Asn Arg Phe Ser	Tyr
	365	370	375
Ala Asn Val Ala	Trp Gln Asp Ile Asp	Phe Ala Val Asp Glu	Asn
	380	385	390
Gly Leu Trp Val	Ile Tyr Ser Thr Glu	Ala Ser Thr Gly Asn	Met
	395	400	405
Val Ile Ser Lys	Leu Asn Asp Thr Thr	Leu Gln Val Leu Asn	Thr
	410	415	420
Trp Tyr Thr Lys	Gln Tyr Lys Pro Ser	Ala Ser Asn Ala Phe	Met
	425	430	435
Val Cys Gly Val	Leu Tyr Ala Thr Arg	Thr Met Asn Thr Arg	Thr
	440	445	450
Glu Glu Ile Phe	Tyr Tyr Asp Thr Thr	Gly Lys Glu Gly	Gly
	455	460	465
Lys Leu Asp Ile	Val Met His Lys Met	Gln Glu Lys Val Gln	Ser
	470	475	480
Ile Asn Tyr Asn	Pro Phe Asp Gln Lys	Leu Tyr Val Tyr Asn	Asp
	485	490	495
Gly Tyr Leu Leu	Asn Tyr Asp Leu Ser	Val Leu Gln Lys Pro	Gln
	500	505	510

<210> 68  
 <211> 410  
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

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cctgtcgctcc accctcctcc cactccaggg agctgtgggc atggtggtgt 100  
ggtgaacatc agcaaaccgt ctgtggttca gctcaactgg agaggggttt 150  
cttatctata tgggtgcttg gtagggatt actctccca gcatccaaac 200  
aaaggnatgt attggnggc gccattgaat acagatggga gactgttga 250  
gtattataga ctgtacaacc cactggatga ttgtctattg tatataaatg 300  
ctcgagagtt gcggatcacc tatggccaag gtagtggtac agcagttac 350  
aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400  
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atggtggtgt ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctaccttggc catagtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72  
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 tggggctgtg ctccatggcg agctggatac catgtttgtg tggaagtgcc 150  
 ccgtgtttgc tatgccgatg ctgtcctagt ggaacaact ccactgtaac 200  
 tagattgac tatgcacttt tcttgcttgt tggagtatgt gtagcttgtg 250  
 taatgttgat accaggaatg gaagaacaac tgaataagat tccgtgattt 300  
 tgtgagaatg agaaagggtg tgtcccttgt aacatttttg ttggctataa 350  
 agctgtatat cgtttgtgct ttggtttggc tatgttctat cttctctctc 400  
 ctttactaat gatcaaagtg aagagtagca gtgatcctag agctgcagtg 450  
 cacaatggat tttggttctt taaatttgct gcagcaattg caattattat 500  
 tggggcattc ttcattccag aaggaacttt tacaactgtg tggttttatg 550  
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 agggaaactcg agatgttggt atgcagcctt gttatcagct acagctctga 700  
 attatctgct gtcttttagt gctatcgtcc tgttctttgt ctactacact 750  
 catccagcca gttgttcaga aaacaaggcg ttcatcagtg tcaacatgct 800  
 cctctgcgtt ggtgcttctg taatgtctat actgcaaaaa atccaagaat 850  
 cacaaccaag atctggtttg ttacagtctt cagtaattac agtctacaca 900  
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 aaggataatc atgggttaga aggaagtgtt ttgaaagtca ctttgaaagt 2200  
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<210> 73  
 <211> 453  
 <212> PRT  
 <213> Homo sapiens

<400> 73

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				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
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Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
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Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
				125					130					135
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu
				155					160					165
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu
				170					175					180
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr
				185					190					195
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu
				200					205					210
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser
				215					220					225
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys
				230					235					240
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser
				245					250					255
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr
				260					265					270
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr
				275					280					285

Asn	Cys	Asn	Pro	Ser	Leu	Leu	Ser	Ile	Ile	Gly	Tyr	Asn	Thr	Thr	
				290					295					300	
Ser	Thr	Val	Pro	Lys	Glu	Gly	Gln	Ser	Val	Gln	Trp	Trp	His	Ala	
				305					310					315	
Gln	Gly	Ile	Ile	Gly	Leu	Ile	Leu	Phe	Leu	Leu	Cys	Val	Phe	Tyr	
				320					325					330	
Ser	Ser	Ile	Arg	Thr	Ser	Asn	Asn	Ser	Gln	Val	Asn	Lys	Leu	Thr	
				335					340					345	
Leu	Thr	Ser	Asp	Glu	Ser	Thr	Leu	Ile	Glu	Asp	Gly	Gly	Ala	Arg	
				350					355					360	
Ser	Asp	Gly	Ser	Leu	Glu	Asp	Gly	Asp	Asp	Val	His	Arg	Ala	Val	
				365					370					375	
Asp	Asn	Glu	Arg	Asp	Gly	Val	Thr	Tyr	Ser	Tyr	Ser	Phe	Phe	His	
				380					385					390	
Phe	Met	Leu	Phe	Leu	Ala	Ser	Leu	Tyr	Ile	Met	Met	Thr	Leu	Thr	
				395					400					405	
Asn	Trp	Ser	Arg	Tyr	Glu	Pro	Ser	Arg	Glu	Met	Lys	Ser	Gln	Trp	
				410					415					420	
Thr	Ala	Val	Trp	Val	Lys	Ile	Ser	Ser	Ser	Trp	Ile	Gly	Ile	Val	
				425					430					435	
Leu	Tyr	Val	Trp	Thr	Leu	Val	Ala	Pro	Leu	Val	Leu	Thr	Asn	Arg	
				440					445					450	

Asp Phe Asp

<210> 74  
 <211> 480  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 48, 163  
 <223> unknown base

<400> 74  
 ggcagaaaga agctgtctcc atcttgtctg tatcccgctg cttcttgnga 50  
 cgttgtggag atggggagcg tcctctgggc tgtgtccat ggcgagctgg 100  
 ataccatgtt tgtgtggaag tgcccgtgt ttgctatgcc gatgtgtcc 150  
 tagtggaac aantocactg taactagatt gatctatgca cttttcttgc 200  
 ttgttggagt atgtgtagct tgtgtaatgt tgataccagg aatggaagaa 250  
 caactgaata agattcctgg attttgtgag aatgagaaag gtttgttccc 300  
 ttgtaacatt ttggttggt ataaagctgt atatcgtttg tgctttggtt 350  
 tggctatgtt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgatc ctagagctgc agtgcacaat ggattttggt tctttaaatt 450  
tgctgcagca attgcaatta ttattggggc 480

<210> 75  
<211> 438  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323  
<223> unknown base

<400> 75  
gttattgtga actttgtgga gatgggaggt cntggggctg tgttccatgg 50  
cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgccga 100  
tgctgtccta gtggaacaa ntccactgta attagattga tntatgcact 150  
ttnttgcctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200  
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaagagt 250  
gttgtccctt gtaacatttt ggttggtctat aaagctgtat atngtttgtg 300  
ctttggtttg gctangttct atnttcttct ctctttacta atgatcaaag 350  
tgaagagtag cagtgatcct agagctgcag tgcacaatgg attttggttt 400  
tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76  
<211> 473  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 48  
<223> unknown base

<400> 76  
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gagatgggga gcgtccttgg ggttgtgctc catggcgagc tggataccat 100  
gtttgtgttg aagtgcctcg tgtttgctat gccgatgtg tctagtggga 150  
aacaactcca ctgtaactag attgatctat gcacttttct tgcttgttgg 200  
agtatgtgta gotttgttaa tgttgatacc aggaatggaa gaacaactga 250  
ataagattcc tggattttgt gagaatgaga aaggtgttgt ccoctgtaac 300  
attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggctat 350  
gttctatctt ctctctctt tactaatgat caaagtgaag agtagcagtg 400  
atcctagagc tgcagtcac aatggatttt ggttctttaa atttgctgca 450  
gcaattgcaa ttattattgg ggc 473



<210> 77  
<211> 666  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 21, 111  
<223> unknown base

<400> 77  
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actttttcct tgcttggttg agtatgtgta gctttgtgta atgttgttcc 100  
caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150  
gaaaggtggt gtccccttgt aacatttttg gttggctata aagctgtata 200  
tcgtttgtgc tttggttttg ctatgttcta tcttcttctc tctttactaa 250  
tgatcaaatg gaagagtagc agtgatccta gagctgcagt gcacaatgga 300  
ttttggttct ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350  
cttcattcca gaaggaactt ttacaactgt gtggttttat gtaggcatgy 400  
cagggtccct ttgtttcatc ctcatacaac tagtcttact tattgatttt 450  
gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaactc 500  
gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550  
tgtctttagt tgctatcgtc ctgttctttg tctactacac tcatccagcc 600  
agttgttcag aaaacaagc gttcatcagt gtcaacatgc tctctcgctg 650  
tggtgcttct gtaatg 666

<210> 78  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 78  
atgtttgtgt ggaagtgccg cg 22

<210> 79  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 79  
gtcaacatgc tctctctg 18

<210> 80  
<211> 26

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 80  
aatccattgt gcactgcagc tctagg 26

<210> 81  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 81  
gagcatgccca ccaactggact gac 23

<210> 82  
<211> 54  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 82  
gccgatgctg tctagtggga aacaactcca ctgtaactag attgatctat 50  
gcac 54

<210> 83  
<211> 3906  
<212> DNA  
<213> Homo sapiens

<400> 83  
ctcgggcgcg cacaggcagc tcggtttgcc ctgcgattga gctgcgggto 50  
gcggcgcgcg ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100  
cgcgaggctt tcggcaaaagg cagtcgagtg ttgcagacc ggggcgagtc 150  
ctgtgaaaagc agataaaaga aaacatttat taactgttca ttacgagggg 200  
agcgcgccggc cggggctgtc gcaactcccc cggaacattt ggtccctccc 250  
agctccgaga gaggagaaga agaaagcgga aaaggagcag attcacgtcg 300  
tttccagcca agtggacctg atcgatggcc ctctgaatt tatcagcata 350  
tttgatttat tagcgatgcc cctcggtttg tgtgttacgc acacacacgt 400  
gcacacaagg ctctggctcg ctctccctccc tcgtttccag ctctggggcg 450  
aatccacat ctgtttcaac tctccgccga gggcgagcag gagcgagagt 500  
gtgtcgaatc tcgagtgaa gagggacgag ggaaaagaaa caaagccaca 550  
gacgcaactt gagactcccc catcccaaaa gaagcaccag atcagcaaaa 600

aaagaagatg ggccccccga gacctgtgct gtgcttgctg tccgcaactg 650  
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 aaaggcaggt ttcagaggga ccgcaggaaac atccgccccca acatcatcct 750  
 ggtgtgtacg gacgaccagg atgtggagct gggttccatg caggtgatga 800  
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 ttcgtgacca caccatgtg ctgcccctca cgctcctcca tctcactgg 900  
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 aatagcactg gctaccggac agctttcttc gggaagtatc ttaatgaata 1050  
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 aaaactcccg tttttataac tacacgctgt gtcggaacgg ggtgaaagag 1150  
 aagcacggct ccgactactc caaggattac ctcacagacc tcatcaccaa 1200  
 tgacacgctg agcttcttec gcacgtccaa gaagatgtac ccgcacaggc 1250  
 cagtctcat ggtcatcagc catgcagccc cccacggccc tgaggattca 1300  
 gccccacaa attcacgcct ctctccaaac gcctctcagc acatcagccc 1350  
 gagctacaa tacgcgccca acccggaaca aactggatc atgcgtaca 1400  
 cggggcccat gaagcccatc cacatggaat tcaccaacat gctccagcgg 1450  
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 caacatgctg gttgagacgg gcgagctgga caacacgtac atcgtatata 1550  
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 gctgcaaggg ttacaagcag tgtaaccccc ggactcgaaa catggacctg 3100  
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 acctgactgc acaggcaatg aaaaaccatg tgggtgattt ccagcagacc 3300  
 tgtgctattg gccaggaggc ctgagaaaag aagcacgcac tctcagtcac 3350  
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 ctcaaaaagg aaaaacggaga gaggcagcga gagagatttc cttggaaatt 3550  
 tctcccaagg gcgaaagtca ttggaatttt taaatcatag gggaaaagca 3600  
 gtccctgttt aaatcctctt attcttttgg tttgtcaca agaaggaact 3650  
 aagaagcagg acagaggcaa cgtggagagg ctgaaaacag tgcagagacg 3700  
 tttgacaatg agtcagtagc acaaaagaga tgacatttac ctacactat 3750  
 aaacctgtgt gcctctgaa gaaactgcct tcattgtata tatgtgacta 3800

tttacatgta atcaacatgg gaacttttag gggaacctaa taagaaatcc 3850  
 caattttcag gagtggtggt gtcaataaac gctctgtggc cagtgtaaaa 3900  
 gaaaaa 3906

<210> 84  
 <211> 867  
 <212> PRT  
 <213> Homo sapiens

<400> 84  
 Met Gly Pro Pro Ser Leu Val Leu Cys Leu Leu Ser Ala Thr Val  
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 Phe Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg  
 20 25 30  
 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn  
 35 40 45  
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser  
 50 55 60  
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly  
 65 70 75  
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro  
 80 85 90  
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn  
 95 100 105  
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala  
 110 115 120  
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly  
 125 130 135  
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly  
 140 145 150  
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys  
 155 160 165  
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys  
 170 175 180  
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu  
 185 190 195  
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met  
 200 205 210  
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro  
 215 220 225  
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro  
 230 235 240  
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn  
 245 250 255

Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro	260	265	270
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln	275	280	285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met	290	295	300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr	305	310	315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly	320	325	330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val	335	340	345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val	350	355	360
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu	365	370	375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu	380	385	390
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met	395	400	405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu	410	415	420
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe	425	430	435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu	440	445	450
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val	455	460	465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro	470	475	480
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys	485	490	495
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp	500	505	510
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys	515	520	525
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val	530	535	540
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp	545	550	555
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala	560	565	570

Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr	
				575					580					585	
Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr	
				590					595					600	
His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu	
				605					610					615	
Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His	
				620					625					630	
Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu	
				635					640					645	
Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys	
				650					655					660	
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu	
				665					670					675	
Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln	
				680					685					690	
Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys	
				695					700					705	
Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys	
				710					715					720	
Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp	
				725					730					735	
Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr	
				740					745					750	
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu	
				755					760					765	
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu	
				770					775					780	
Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val	
				785					790					795	
Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu	
				800					805					810	
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg	
				815					820					825	
Thr	Arg	Asn	Met	Asp	Leu	Asp	Gly	Gly	Ser	Tyr	Glu	Gln	Tyr	Arg	
				830					835					840	
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser	
				845					850					855	
Lys	Ser	Leu	Gly	Gln	Leu	Trp	Glu	Gly	Trp	Glu	Gly				
				860					865						

<210> 85  
 <211> 19  
 <212> DNA

<213> Artificial Sequence  
 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 85  
 gaagccggct gtctgaatc 19  
 <210> 86  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
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 <223> Synthetic oligonucleotide probe  
 <400> 86  
 ggcagctat ctccgag 18  
 <210> 87  
 <211> 18  
 <212> DNA  
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 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 87  
 aagggcctgc aagagaag 18  
 <210> 88  
 <211> 18  
 <212> DNA  
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 <220>  
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 <400> 88  
 cactgggaca actgtggg 18  
 <210> 89  
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 <212> DNA  
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 <223> Synthetic oligonucleotide probe  
 <400> 89  
 cagaggcaac gtggagag 18  
 <210> 90  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 90  
 aagtattgtc atacagtgtt c 21



<210> 91  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 91  
tagtacttgg gcacgaggtt ggag 24

<210> 92  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 92  
tcataccaac tgctgggtcat tggc 24

<210> 93  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 93  
ctcaagctgc tggacacgga gcggccggtg aatcggttcc acttg 45

<210> 94  
<211> 971  
<212> DNA  
<213> Homo sapiens

<400> 94  
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aaggagtgag gagctgctgg gcagagaggg actgtccggc tcccagatgc 100  
tgggcctcct ggggagcaca gcctcgtgg gatggatcac aggtgctgct 150  
gtggcggtcc tgctgctgct gctgctgctg gccacctgcc tttccacgg 200  
acggcaggac tgtgacgtgg agaggaaccg tacagctgca gggggaaacc 250  
gagtcccgcc ggcccagcct tggcccttcc ggcggcgggg ccacctggga 300  
atctttcacc atcaccgtca tcttgccac gtatctcatg tgccgaatgt 350  
gggcctccac caccaccacc acccccgcca caccctcac cacctccacc 400  
accaccacca cccccaccg caccatcccc gccacgtcg ctgagggtgc 450  
tgtgcgggtg gcctgtggac agcagctgcc cctgccctcc catctgttcc 500  
caggacaagt ggaccccatg tttccatgtg gaaggatgca tctctggggg 550  
gaacgagggg aacaatagac tggggccttc tccagctgca tttgcatggc 600

atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650  
 gtgctgaagg gtttggggag tggagagcaa ggggtgcttt tcggggcttg 700  
 acagcccgctc ttgtgacagt gactcccagt gagccccaga aatgacaagc 750  
 gtgtcttggc agagccagca cacaagtgga tgtgaagtgc ccgtcttgac 800  
 ctctcatca ggctgctgca ggcctctggc gggcaggcca ctgggagagg 850  
 ccctgagaat gtccttttgg tttggagaag gcagtgtgag gctgcacagt 900  
 caattcatcg gtgccttagt ccaagaaaat aaaaaccact aagaagcttt 950  
 aaaaaaaaa aaaaaaaaa a 971

<210> 95  
 <211> 115  
 <212> PRT  
 <213> Homo sapiens

<400> 95  
 Met Leu Gly Leu Leu Gly Ser Thr Ala Leu Val Gly Trp Ile Thr  
 1 5 10 15  
 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr  
 20 25 30  
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg  
 35 40 45  
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro  
 50 55 60  
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His  
 65 70 75  
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His  
 80 85 90  
 His His Pro Arg His Thr Pro His His Leu His His His His His  
 95 100 105  
 Pro His Arg His His Pro Arg His Ala Arg  
 110 115

<210> 96  
 <211> 1312  
 <212> DNA  
 <213> Homo sapiens

<400> 96  
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 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150  
 aagtgagtgc tgggtcacc cccatccgca acgtcaactgt ggcctacaag 200  
 ttccacatgg ggctctatgg tgagactggg cggtctttca ctgagagctg 250  
 cagcatctct cccaagctcc gctccatcgc tgtctactat gacaaccccc 300

acatggtgcc cctgataag tgccgatgtg ccgtgggcag catcctgagt 350  
 gaaggtgagg aatcgccctc ccttgagctc atcgacctct accgaaatt 400  
 tggcttcaag gtgttctcct tcccggcacc cagccatgtg gtgacagcca 450  
 ccttccccta caccaccatt ctgtccatct ggctggctac ccgccgtgtc 500  
 catcctgcct tggacaccta catcaaggag cggaagctgt gtgcctatcc 550  
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 caccggcagg agacttctat gtgcctgaga tgaaggagac agagtggaaa 650  
 tggcgggggc ttgtggaggc cattgacacc caggtggatg gcacaggagc 700  
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 tgggatgacg gtgacacccg cagcgagcac agctacagcg agtcaggtgc 850  
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 gggagtacg gctggaccct gggactgagc ccctggggac taccaagtgg 950  
 ctctgggagc ccactgcccc tgagaagggc aaggagtaac ccattggcctg 1000  
 caccctctg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050  
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 acctgacttc cctgtctcca gccctcttgc taagccttct cctcactgcc 1150  
 ctttagcttc ccagggccag aggagccagg gactattttc tgcaccagcc 1200  
 cccagggctg ccgcccctgt tgtgtctttt ttccagactc acagtggagc 1250  
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 aaaaaaaaaa aa 1312

<210> 97  
 <211> 313  
 <212> PRT  
 <213> Homo sapiens

<400> 97  
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 20 25 30  
 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn  
 35 40 45  
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr  
 50 55 60  
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg  
 65 70 75

Ser	Ile	Ala	Val	Tyr	Tyr	Asp	Asn	Pro	His	Met	Val	Pro	Pro	Asp	
				80					85					90	
Lys	Cys	Arg	Cys	Ala	Val	Gly	Ser	Ile	Leu	Ser	Glu	Gly	Glu	Glu	
				95					100					105	
Ser	Pro	Ser	Pro	Glu	Leu	Ile	Asp	Leu	Tyr	Gln	Lys	Phe	Gly	Phe	
				110					115					120	
Lys	Val	Phe	Ser	Phe	Pro	Ala	Pro	Ser	His	Val	Val	Thr	Ala	Thr	
				125					130					135	
Phe	Pro	Tyr	Thr	Thr	Ile	Leu	Ser	Ile	Trp	Leu	Ala	Thr	Arg	Arg	
				140					145					150	
Val	His	Pro	Ala	Leu	Asp	Thr	Tyr	Ile	Lys	Glu	Arg	Lys	Leu	Cys	
				155					160					165	
Ala	Tyr	Pro	Arg	Leu	Glu	Ile	Tyr	Gln	Glu	Asp	Gln	Ile	His	Phe	
				170					175					180	
Met	Cys	Pro	Leu	Ala	Arg	Gln	Gly	Asp	Phe	Tyr	Val	Pro	Glu	Met	
				185					190					195	
Lys	Glu	Thr	Glu	Trp	Lys	Trp	Arg	Gly	Leu	Val	Glu	Ala	Ile	Asp	
				200					205					210	
Thr	Gln	Val	Asp	Gly	Thr	Gly	Ala	Asp	Thr	Met	Ser	Asp	Thr	Ser	
				215					220					225	
Ser	Val	Ser	Leu	Glu	Val	Ser	Pro	Gly	Ser	Arg	Glu	Thr	Ser	Ala	
				230					235					240	
Ala	Thr	Leu	Ser	Pro	Gly	Ala	Ser	Ser	Arg	Gly	Trp	Asp	Asp	Gly	
				245					250					255	
Asp	Thr	Arg	Ser	Glu	His	Ser	Tyr	Ser	Glu	Ser	Gly	Ala	Ser	Gly	
				260					265					270	
Ser	Ser	Phe	Glu	Glu	Leu	Asp	Leu	Glu	Gly	Glu	Gly	Pro	Leu	Gly	
				275					280					285	
Glu	Ser	Arg	Leu	Asp	Pro	Gly	Thr	Glu	Pro	Leu	Gly	Thr	Thr	Lys	
				290					295					300	
Trp	Leu	Trp	Glu	Pro	Thr	Ala	Pro	Glu	Lys	Gly	Lys	Glu			
				305					310						

<210> 98

<211> 725

<212> DNA

<213> Homo sapiens

<400> 98

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ctgaggctgg gctcgaaacc gaaagtcgcc tccggaccct ccaagtggag 200

accctggtgg agccccaga accatgtgcc gagcccgtg cttttggaga 250

cacgcttcac atacactaca cggaagcctt ggtagatgga cgtattattg 300  
 acacctccct gaccagagac cctctgggta tagaacttgg ccaaaagcag 350  
 gtgattccag gtctggagca gagtcttctc gacatgtgtg tgggagagaa 400  
 gcgaaggcca atcattcctt ctcacttggc ctatggaaaa cggggatttc 450  
 caccatctgt ccagcgcat gcagtgtgac agtatgacgt ggagctgatt 500  
 gcactaatcc gagccaacta ctggctaaag ctgggtgaagg gcattttgcc 550  
 tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600  
 acctatacag aaaggccaat agaccctaaag tctccaaaaa gaagctcaag 650  
 gaagagaaac gaaacaagag caaaaagaaa taataataa taaattttaa 700  
 aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99  
 <211> 201  
 <212> PRT  
 <213> Homo sapiens

<400> 99  
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 Leu Leu Leu Ser Ala Ala Val Cys Arg Ala Glu Ala Gly Leu Glu  
 20 25 30  
 Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu  
 35 40 45  
 Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu  
 50 55 60  
 His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp  
 65 70 75  
 Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys  
 80 85 90  
 Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val  
 95 100 105  
 Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly  
 110 115 120  
 Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln  
 125 130 135  
 Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu  
 140 145 150  
 Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val  
 155 160 165  
 Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala  
 170 175 180  
 Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg

Asn Lys Ser Lys Lys Lys  
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<210> 100

<211> 705

<212> DNA

<213> Homo sapiens

<400> 100

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cgetccatct gctgctgctg ctgctgctca gtgcggcggt gtgcggggct 150  
gaggtcgggc tcgaaaccga aagtcccgtc cggaccctcc aagtggagac 200  
cctggtggag cccccagAAC catgtgccga gcccgctgct tttggagaca 250  
cgcttcacat acactacacg ggaagccttg tagatggacg tattattgac 300  
acctccctga ccagagaccc tctggttata gaacttgGCC aaaagcagg 350  
gattccaggc ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400  
gaagggcaat cattccctct cacttggcct atgaaaaacg gggatttcca 450  
ccatctgtcc cagcggatgc agtggtgcag tatgacgtgg agctgattgc 500  
actaatccga gccaaactact ggctaaagct ggtgaagggc attttgctcc 550  
tggtagggat ggccatggtg ccaccctcct gggcctcatt gggatcacc 600  
tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650  
gagaaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700  
actta 705

<210> 101

<211> 543

<212> DNA

<213> Homo sapiens

<400> 101

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gaaccatgtg ccgagcccg cgtcttttga gacacgctt acatacacta 100  
cacgggaagc ttggtagatg gaagtattat tgacacctcc ctgaccagag 150  
accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200  
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggc caatcattcc 250  
ttctcacttg gcctatggaa aacggggatt tccaccatct gtcccagcgg 300  
atgcagtggc gcagtatgac gtggagctga ttgcactaat ccgagccaac 350  
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctctctgggcc tcattgggta tcacctatac agaaaggcca 450  
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaaacaag 500  
 agcaaaaaga aataataaat aataaat tttt aaaaaactta aaa 543

<210> 102

<211> 1316

<212> DNA

<213> Homo sapiens

<400> 102

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 ccaactgcacg acgggggttg actgacctga aaaaaatgtc tggatttcta 150  
 gagggcttga gatgctcaga atgcattgac tggggggaaa agcgaatac 200  
 tattgtctcc attgctgctg gtgtactatt ttttacaggc tgggtggatta 250  
 tcatagatgc agctgttatt tatccacca tgaagattt caaccactca 300  
 taccatgcct gtggtgttat agcaaccata gccttcttaa tgattaatgc 350  
 agtatcgaat ggacaagtcc gaggtgatag ttacagtga ggtgtgctgg 400  
 gtcaaacagg tgctcgcat tggcttttgc ttggtttcat gttggccttt 450  
 ggatctctga ttgcatctat ttggattctt ttggagggt atgttgctaa 500  
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550  
 tcatcttttt tggagggtg gtttttaagt ttggcgcac tgaagactta 600  
 tggcagtgaa cacatctgat ttcccacagc acaacagccc tgcattgggt 650  
 gtgtttgttt tttactgtc actcccaacc ttttgtaag ccattttcta 700  
 aacttatctc tgagtgtagt ctgagcttaa agttgtgtaa tactaaaatc 750  
 acgagaacac ctaaaacaaca accaaaaatc tattgtggtg tgcacttgat 800  
 taacttataa aatgttagag gaaactttca catgaataat ttttgtaaaa 850  
 ttttatcatg gtataatttg taaaaataaa aagaaattac aaaagaaatt 900  
 atggatttgt caatgtaagt attgtcata tctgaggtcc aaaaccacaa 950  
 tgaaagtgtc ctgaagattt aatgtgttta ttcaaagtgt gtctcttctg 1000  
 tgtcaaatgt taaatgaaat ataaacattt tttagttttt aaaatattcc 1050  
 gtggtcaaaa ttcttctca ctataattgg tatttacttt taccaaaaat 1100  
 tctgtgaaca tgtaatgtaa ctggcttttg aggtctctcc aagggttgag 1150  
 tggacgtgtt ggaagagaga agcaccatgg tccagccacc aggtctccgt 1200  
 tgtcccttcc atgggaaggt ctccgctgt gcctctcatt ccaaggcgag 1250  
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tccacatcca ccactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

Met	Ser	Gly	Phe	Leu	Glu	Gly	Leu	Arg	Cys	Ser	Glu	Cys	Ile	Asp
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Trp	Gly	Glu	Lys	Arg	Asn	Thr	Ile	Ala	Ser	Ile	Ala	Ala	Gly	Val
				20					25					30
Leu	Phe	Phe	Thr	Gly	Trp	Trp	Ile	Ile	Ile	Asp	Ala	Ala	Val	Ile
				35					40					45
Tyr	Pro	Thr	Met	Lys	Asp	Phe	Asn	His	Ser	Tyr	His	Ala	Cys	Gly
				50					55					60
Val	Ile	Ala	Thr	Ile	Ala	Phe	Leu	Met	Ile	Asn	Ala	Val	Ser	Asn
				65					70					75
Gly	Gln	Val	Arg	Gly	Asp	Ser	Tyr	Ser	Glu	Gly	Cys	Leu	Gly	Gln
				80					85					90
Thr	Gly	Ala	Arg	Ile	Trp	Leu	Phe	Val	Gly	Phe	Met	Leu	Ala	Phe
				95					100					105
Gly	Ser	Leu	Ile	Ala	Ser	Met	Trp	Ile	Leu	Phe	Gly	Gly	Tyr	Val
				110					115					120
Ala	Lys	Glu	Lys	Asp	Ile	Val	Tyr	Pro	Gly	Ile	Ala	Val	Phe	Phe
				125					130					135
Gln	Asn	Ala	Phe	Ile	Phe	Phe	Gly	Gly	Leu	Val	Phe	Lys	Phe	Gly
				140					145					150
Arg	Thr	Glu	Asp	Leu	Trp	Gln								
				155										

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

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tggtatttcta gagggttga gatgctcaga atgcattgac tggggggaaa 150  
agcgcaatac tattgcttcc attgctgctg gtgtactatt ttttacaggc 200  
tggtggatta tcatagatgc agctgttatt tatccacca tgaaagattt 250  
caaccactca taccatgcct gtggtgttat agcaaccata gccttccata 300  
tgattaatgc agtatcgaat ggacaagtcc gaggtgatag ttacagttaa 350  
ggtgtctcgg gtcaaacagg tgctcgcat tggcttttcg ttggtttcat 400



gttgccctt ggatctctga ttgatctat gtggattctt tttggaggtt 450  
atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatttttc 500  
cagaatgcct tcattctttt tggagggtg gtttttaagt ttggc 545

<210> 105

<211> 490

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 31, 39, 108, 145, 179, 219, 412, 479

<223> unknown base

<400> 105

tggacggacc tgaaaaaat gtttggattt ntagaggnt tgagatgttc 50  
agaatgcacg actgggggaa aagcgcaaat actattgctt ccattgctgc 100  
tgggtgnta ttttttacag gctggtggat tatcatagat gcagntgtta 150  
tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200  
atagcaacca tagccttcnt aatgattaat gcagtatcga atggacaagt 250  
ccgaggtgat agttacagtg aaggttgttt gggctcaaaca ggtgctcgca 300  
tttggtcttt cgttggttcc atgttggcct ttggatctct gattgcattc 350  
atgtggattc tttttggagg ttattgttct aaagaaaaag acatagtata 400  
ccctggaatt gntgtatttt tccagaatgc cttcatcttt tttggagggc 450  
tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106

<211> 466

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 26, 38, 81, 115, 207, 329, 380, 446, 449

<223> unknown base

<400> 106

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aatgtttgga ttttttagag gcttgagatg ntcagaatgc attgactggg 100  
ggaaaagcgc aatantattg ctttcattg ctgctggtgt actatttttt 150  
acagggtggt ggattatcat agatgcagct gttattttat ccacatgaa 200  
agatttnaac cactcatacc atgcctgttg tgttatagca accatagcct 250  
tcctaattgat taatgcagta tcgaatggac aagtcaggg tgatagttac 300  
agtgaaggtt gtttgggtca aacaggtgnt cgcatttggc ttttcgttgg 350  
ttcatgttg gcctttggat ttctgattgn attctatgcg gattcttctt 400

ggagggttatg ttgctaaaga aaaagacata gtataccctg gaatttctnt 450

atttttccag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

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antattgctt ccattgntgn tgggtgnta tttttttaca ggcgtggtga 100

ttatnataga tgcagctgtt atttatccca ccatgaaaga tttnaaccan 150

tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200

tgcagtatng aatggacaag tccgagggtga tagttacagt gaaggttgtt 250

tgggtcaaac aggtgntngc atttggtctt tngttggttt catgttggcc 300

tttggatctn tgattgcatt tatgtggatt ntttttgtag gttatgttgc 350

taaaagnaaa gacatagtat accctgt 377

<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

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ggcccccggc gccgngacac cgggttcogg gaaccattgc acgacggggt 100

ggaactgact gaaaaaaaaatg tttggatttn tagagggtct gagatgctca 150

gaatgcattg actgggggga aaagcgcaat actattgctt ccattgctgc 200

tgggtgacta ttttttacag gctggttgat tatcatagat gcagctgtta 250

tttatcccac catgaaagat ttoaaccaat cataccatgc ctgtggtgtt 300

atagcaacca tagccttcct aatgattaat gcagtatoga atggacaagt 350

ccgagggtgat agttacatg aaggttgtct gggtaaaaca ggtgctcgca 400

tttggttttt cgttggttct atgttggtct ttggatntct gattgcactc 450

atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 500

ccctggaatt gctgtatttt tccagaatgc cttcatnttt tttggagggc 550

tg 552

<210> 109  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 109  
gggtggatgg tactgctgca tcc 23

<210> 110  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 110  
tgtgtgtgctg tgggaaatca gatgtg 26

<210> 111  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 111  
gtgtctggag gctgtggcgc ttttgttttc ttgggctaaa atcggg 46

<210> 112  
<211> 3004  
<212> DNA  
<213> Homo sapiens

<400> 112  
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tgctggccgt cctctgcaaa gtttacttgg gactattctc tggcagctcc 100  
cogaatcctt tctccgaaga tgtcaaacgg ccccagcgc ccttggtaac 150  
tgacaaggag gccaggaaga aggttctcaa acaagctttt tcagccaacc 200  
aagtgcggga gaagctggat gtggtggtaa ttggcagtgg ctttgggggc 250  
ctggctgcag ctgcaattct agctaaagct ggcaagcgag tcctgggtgct 300  
ggaacaacat accaaggcag ggggctgctg tcataccttt ggaagaagt 350  
gccttgatgt tgacacagga atccattaca ttggcgctat ggaagagggc 400  
agcattggcc gttttatctt ggaccagatc actgaagggc agctggactg 450  
ggctcccctg tcctctcctt ttgacatcat ggtactggaa gggcccaatg 500  
gccgaaagga gtaccccatg tacagtggag agaaagccta cattcagggc 550

ctcaaggaga agtttcacaca ggaggaagct atcattgaca agtatataaa 600  
 gctggttaag gtggtatcca gtggagcccc tcatgccatc ctgtgaaat 650  
 tctccaccat gcccggtggtt cagctcctcg acagggtggtg gctgctgact 700  
 cgtttctctc cattccttca agcatccacc cagagcctgg ctgaggctct 750  
 gcagcagctg ggggcctcct ctgagctcca ggcagtactc agctacatct 800  
 tccccactta cgggtgcacc cccaaccaca gtgccttttc catgcacgcc 850  
 ctgctggtca accactacat gaaaggaggc ttttatcccc gaggggggtc 900  
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 ctgtcctcac aaaggccact gtgcagagtgt tgttgctgga ctgagctggg 1000  
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<210> 113  
 <211> 610  
 <212> PRT  
 <213> Homo sapiens

<400> 113  
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 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Ala Pro Leu Val  
 35 40 45  
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser  
 50 55 60  
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser  
 65 70 75  
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly  
 80 85 90  
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys  
 95 100 105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile	110	115	120
His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile	125	130	135
Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser	140	145	150
Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys	155	160	165
Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu	170	175	180
Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile	185	190	195
Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu	200	205	210
Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys	215	220	225
Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln	230	235	240
Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu	245	250	255
Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro	260	265	270
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr	275	280	285
Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala	290	295	300
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu	305	310	315
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys	320	325	330
Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile	335	340	345
Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr	350	355	360
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys	365	370	375
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val	380	385	390
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser	395	400	405
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met	410	415	420

Glu	Arg	Tyr	Val	Ser	Met	Pro	Arg	Glu	Glu	Ala	Ala	Glu	His	Ile
				425					430					435
Pro	Leu	Leu	Phe	Phe	Ala	Phe	Pro	Ser	Ala	Lys	Asp	Pro	Thr	Trp
				440					445					450
Glu	Asp	Arg	Phe	Pro	Gly	Arg	Ser	Thr	Met	Ile	Met	Leu	Ile	Pro
				455					460					465
Thr	Ala	Tyr	Glu	Trp	Phe	Glu	Glu	Trp	Gln	Ala	Glu	Leu	Lys	Gly
				470					475					480
Lys	Arg	Gly	Ser	Asp	Tyr	Glu	Thr	Phe	Lys	Asn	Ser	Phe	Val	Glu
				485					490					495
Ala	Ser	Met	Ser	Val	Val	Leu	Lys	Leu	Phe	Pro	Gln	Leu	Glu	Gly
				500					505					510
Lys	Val	Glu	Ser	Val	Thr	Ala	Gly	Ser	Pro	Leu	Thr	Asn	Gln	Phe
				515					520					525
Tyr	Leu	Ala	Ala	Pro	Arg	Gly	Ala	Cys	Tyr	Gly	Ala	Asp	His	Asp
				530					535					540
Leu	Gly	Arg	Leu	His	Pro	Cys	Val	Met	Ala	Ser	Leu	Arg	Ala	Gln
				545					550					555
Ser	Pro	Ile	Pro	Asn	Leu	Tyr	Leu	Thr	Gly	Gln	Asp	Ile	Phe	Thr
				560					565					570
Cys	Gly	Leu	Val	Gly	Ala	Leu	Gln	Gly	Ala	Leu	Leu	Cys	Ser	Ser
				575					580					585
Ala	Ile	Leu	Lys	Arg	Asn	Leu	Tyr	Ser	Asp	Leu	Lys	Asn	Leu	Asp
				590					595					600
Ser	Arg	Ile	Arg	Ala	Gln	Lys	Lys	Lys	Asn					
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<210> 114

<211> 1701

<212> DNA

<213> Homo sapiens

<400> 114

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 gatagggtcg acgctgctgc tgtgtgcggt gctgctgagc ttggcctcgg 150  
 cgtcctcgga tgaagaaggc agccaggatg aatccttaga ttccaagact 200  
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 agtgtctggt caaatatttc ttgattcaga agaactctgaa ttagaatcct 300  
 ctattcaaga agaggaagac agcctcaaga gccaaaggagg ggaagtgtc 350  
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400  
 tgaagagcca aagaaagtac ggaaaccagc ttgaccgcc attgaaggca 450

cagcacatgg ggagccctgc cacttccctt ttcttttctt agataaggag 500  
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 tacaacctat gactacaaag cagatgaaaa gtggggcttt tgtgaaactg 600  
 aagaagaggc tgctaagaga cggcagatgc aggaagcaga aatgatgtat 650  
 caaactgga tgaaaatcct taatggaagc aataagaaa gccaaaaaag 700  
 agaagcatat cggatatctcc aaaaggcagc aagcatgaac cataccaaa 750  
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<210> 115

<211> 301

<212> PRT

<213> Homo sapiens

<400> 115

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Leu Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp  
 20 25 30



Glu Ser Leu Asp	Ser Lys Thr Thr Leu Thr Ser Asp Glu Ser Val	35	40	45
Lys Asp His Thr	Thr Ala Gly Arg Val Val Ala Gly Gln Ile Phe	50	55	60
Leu Asp Ser Glu	Glu Ser Glu Leu Glu Ser Ser Ile Gln Glu Glu	65	70	75
Glu Asp Ser Leu	Lys Ser Gln Glu Gly Glu Ser Val Thr Glu Asp	80	85	90
Ile Ser Phe Leu	Glu Ser Pro Asn Pro Glu Asn Lys Asp Tyr Glu	95	100	105
Glu Pro Lys Lys	Val Arg Lys Pro Ala Leu Thr Ala Ile Glu Gly	110	115	120
Thr Ala His Gly	Glu Pro Cys His Phe Pro Phe Leu Phe Leu Asp	125	130	135
Lys Glu Tyr Asp	Glu Cys Thr Ser Asp Gly Arg Glu Asp Gly Arg	140	145	150
Leu Trp Cys Ala	Thr Thr Tyr Asp Tyr Lys Ala Asp Glu Lys Trp	155	160	165
Gly Phe Cys Glu	Thr Glu Glu Glu Ala Ala Lys Arg Arg Gln Met	170	175	180
Gln Glu Ala Glu	Met Met Tyr Gln Thr Gly Met Lys Ile Leu Asn	185	190	195
Gly Ser Asn Lys	Lys Ser Gln Lys Arg Glu Ala Tyr Arg Tyr Leu	200	205	210
Gln Lys Ala Ala	Ser Met Asn His Thr Lys Ala Leu Glu Arg Val	215	220	225
Ser Tyr Ala Leu	Leu Phe Gly Asp Tyr Leu Pro Gln Asn Ile Gln	230	235	240
Ala Ala Arg Glu	Met Phe Glu Lys Leu Thr Glu Glu Gly Ser Pro	245	250	255
Lys Gly Gln Thr	Ala Leu Gly Phe Leu Tyr Ala Ser Gly Leu Gly	260	265	270
Val Asn Ser Ser	Gln Ala Lys Ala Leu Val Tyr Tyr Thr Phe Gly	275	280	285
Ala Leu Gly Gly	Asn Leu Ile Ala His Met Val Leu Val Ser Arg	290	295	300

Leu

<210> 116  
 <211> 584  
 <212> DNA  
 <213> Homo sapiens  
 <400> 116

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 aaggatgagg ccacaatgc ctgtgtcctc accattagtc ccgtgcagcc 400  
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 aaaatgggtt aataatattc aacatgtcaa caac 584

<210> 117  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 117  
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 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln  
 35 40 45  
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg  
 50 55 60  
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu  
 65 70 75  
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala  
 80 85 90  
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val  
 95 100 105  
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly  
 110 115 120

Phe Ser Pro

<210> 118  
 <211> 3402  
 <212> DNA  
 <213> Homo sapiens

<400> 118

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 ccccgccgcc cccccgtga gcccccgcc gaggtccgga caggccgaga 150  
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 aa 3402

<210> 119

<211> 504

<212> PRT

<213> Homo sapiens

<400> 119

Met	Thr	Pro	Ser	Pro	Leu	Leu	Leu	Leu	Leu	Pro	Pro	Leu	Leu	1	5	10	15
Leu	Gly	Ala	Phe	Pro	Pro	Ala	Ala	Ala	Ala	Arg	Gly	Pro	Pro	Lys	20	25	30
Met	Ala	Asp	Lys	Val	Val	Pro	Arg	Gln	Val	Ala	Arg	Leu	Gly	Arg	35	40	45
Thr	Val	Arg	Leu	Gln	Cys	Pro	Val	Glu	Gly	Asp	Pro	Pro	Pro	Leu	50	55	60
Thr	Met	Trp	Thr	Lys	Asp	Gly	Arg	Thr	Ile	His	Ser	Gly	Trp	Ser	65	70	75
Arg	Phe	Arg	Val	Leu	Pro	Gln	Gly	Leu	Lys	Val	Lys	Gln	Val	Glu	80	85	90
Arg	Glu	Asp	Ala	Gly	Val	Tyr	Val	Cys	Lys	Ala	Thr	Asn	Gly	Phe	95	100	105
Gly	Ser	Leu	Ser	Val	Asn	Tyr	Thr	Leu	Val	Val	Leu	Asp	Asp	Ile	110	115	120
Ser	Pro	Gly	Lys	Glu	Ser	Leu	Gly	Pro	Asp	Ser	Ser	Ser	Gly	Gly	125	130	135
Gln	Glu	Asp	Pro	Ala	Ser	Gln	Gln	Trp	Ala	Arg	Pro	Arg	Phe	Thr	140	145	150
Gln	Pro	Ser	Lys	Met	Arg	Arg	Arg	Val	Ile	Ala	Arg	Pro	Val	Gly	155	160	165
Ser	Ser	Val	Arg	Leu	Lys	Cys	Val	Ala	Ser	Gly	His	Pro	Arg	Pro	170	175	180
Asp	Ile	Thr	Trp	Met	Lys	Asp	Asp	Gln	Ala	Leu	Thr	Arg	Pro	Glu	185	190	195
Ala	Ala	Glu	Pro	Arg	Lys	Lys	Lys	Trp	Thr	Leu	Ser	Leu	Lys	Asn	200	205	210
Leu	Arg	Pro	Glu	Asp	Ser	Gly	Lys	Tyr	Thr	Cys	Arg	Val	Ser	Asn	215	220	225
Arg	Ala	Gly	Ala	Ile	Asn	Ala	Thr	Tyr	Lys	Val	Asp	Val	Ile	Gln	230	235	240

Arg	Thr	Arg	Ser	Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn
				245					250					255
Thr	Thr	Val	Asp	Phe	Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val
				260					265					270
Arg	Ser	Asp	Val	Lys	Pro	Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu
				275					280					285
Tyr	Gly	Ala	Glu	Gly	Arg	His	Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly
				290					295					300
Gln	Lys	Phe	Val	Val	Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro
				305					310					315
Asp	Gly	Ser	Tyr	Leu	Asn	Lys	Leu	Leu	Ile	Thr	Arg	Ala	Arg	Gln
				320					325					330
Asp	Asp	Ala	Gly	Met	Tyr	Ile	Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly
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Tyr	Ser	Phe	Arg	Ser	Ala	Phe	Leu	Thr	Val	Leu	Pro	Asp	Pro	Lys
				350					355					360
Pro	Pro	Gly	Pro	Pro	Val	Ala	Ser	Ser	Ser	Ser	Ala	Thr	Ser	Leu
				365					370					375
Pro	Trp	Pro	Val	Val	Ile	Gly	Ile	Pro	Ala	Gly	Ala	Val	Phe	Ile
				380					385					390
Leu	Gly	Thr	Leu	Leu	Leu	Trp	Leu	Cys	Gln	Ala	Gln	Lys	Lys	Pro
				395					400					405
Cys	Thr	Pro	Ala	Pro	Ala	Pro	Pro	Leu	Pro	Gly	His	Arg	Pro	Pro
				410					415					420
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Gly	Ser	Pro	Ala	Ala	Pro	Gln	His	Leu	Leu	Gly	Pro	Gly	Pro	Val
				455					460					465
Ala	Gly	Pro	Lys	Leu	Tyr	Pro	Lys	Leu	Tyr	Thr	Asp	Ile	His	Thr
				470					475					480
His	Thr	His	Thr	His	Ser	His	Thr	His	Ser	His	Val	Glu	Gly	Lys
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Val	His	Gln	His	Ile	His	Tyr	Gln	Cys						
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<210> 121

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<212> DNA

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<223> Synthetic oligonucleotide probe

<400> 121

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<210> 122

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<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

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<210> 123

<211> 4420

<212> DNA

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 <212> PRT  
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 35 40 45  
 Pro Ala Asp Thr Leu Glu Ser Pro Gly Glu Trp Thr Thr Trp Phe  
 50 55 60  
 Asn Ile Asp Tyr Pro Gly Gly Lys Gly Asp Tyr Glu Arg Leu Asp  
 65 70 75  
 Ala Ile Arg Phe Tyr Thr Gly Asp Arg Val Cys Ala Arg Pro Leu  
 80 85 90  
 Arg Leu Glu Ala Arg Thr Thr Asp Trp Thr Pro Ala Gly Ser Thr  
 95 100 105  
 Gly Gln Val Val His Gly Ser Pro Arg Glu Gly Phe Trp Cys Leu  
 110 115 120  
 Asn Arg Glu Gln Arg Pro Gly Gln Asn Cys Ser Asn Tyr Thr Val  
 125 130 135  
 Arg Phe Leu Cys Pro Pro Gly Ser Leu Arg Arg Asp Thr Glu Arg  
 140 145 150  
 Ile Trp Ser Pro Trp Ser Pro Trp Ser Lys Cys Ser Ala Ala Cys  
 155 160 165  
 Gly Gln Thr Gly Val Gln Thr Arg Thr Arg Ile Cys Leu Ala Glu  
 170 175 180  
 Met Val Ser Leu Cys Ser Glu Ala Ser Glu Glu Gly Gln His Cys  
 185 190 195  
 Met Gly Gln Asp Cys Thr Ala Cys Asp Leu Thr Cys Pro Met Gly  
 200 205 210

Gln Val Asn Ala Asp Cys Asp Ala Cys Met Cys Gln Asp Phe Met	215	225
Leu His Gly Ala Val Ser Leu Pro Gly Gly Ala Pro Ala Ser Gly	230	240
Ala Ala Ile Tyr Leu Leu Thr Lys Thr Pro Lys Leu Leu Thr Gln	245	255
Thr Asp Ser Asp Gly Arg Phe Arg Ile Pro Gly Leu Cys Pro Asp	260	270
Gly Lys Ser Ile Leu Lys Ile Thr Lys Val Lys Phe Ala Pro Ile	275	285
Val Leu Thr Met Pro Lys Thr Ser Leu Lys Ala Ala Thr Ile Lys	290	300
Ala Glu Phe Val Arg Ala Glu Thr Pro Tyr Met Val Met Asn Pro	305	315
Glu Thr Lys Ala Arg Arg Ala Gly Gln Ser Val Ser Leu Cys Cys	320	330
Lys Ala Thr Gly Lys Pro Arg Pro Asp Lys Tyr Phe Trp Tyr His	335	345
Asn Asp Thr Leu Leu Asp Pro Ser Leu Tyr Lys His Glu Ser Lys	350	360
Leu Val Leu Arg Lys Leu Gln Gln His Gln Ala Gly Glu Tyr Phe	365	375
Cys Lys Ala Gln Ser Asp Ala Gly Ala Val Lys Ser Lys Val Ala	380	390
Gln Leu Ile Val Thr Ala Ser Asp Glu Thr Pro Cys Asn Pro Val	395	405
Pro Glu Ser Tyr Leu Ile Arg Leu Pro His Asp Cys Phe Gln Asn	410	420
Ala Thr Asn Ser Phe Tyr Tyr Asp Val Gly Arg Cys Pro Val Lys	425	435
Thr Cys Ala Gly Gln Gln Asp Asn Gly Ile Arg Cys Arg Asp Ala	440	450
Val Gln Asn Cys Cys Gly Ile Ser Lys Thr Glu Glu Arg Glu Ile	455	465
Gln Cys Ser Gly Tyr Thr Leu Pro Thr Lys Val Ala Lys Glu Cys	470	480
Ser Cys Gln Arg Cys Thr Glu Thr Arg Ser Ile Val Arg Gly Arg	485	495
Val Ser Ala Ala Asp Asn Gly Glu Pro Met Arg Phe Gly His Val	500	510
Tyr Met Gly Asn Ser Arg Val Ser Met Thr Gly Tyr Lys Gly Thr	515	525

Phe Thr Leu His Val Pro Gln Asp Thr Glu Arg Leu Val Leu Thr	530	535	540
Phe Val Asp Arg Leu Gln Lys Phe Val Asn Thr Thr Lys Val Leu	545	550	555
Pro Phe Asn Lys Lys Gly Ser Ala Val Phe His Glu Ile Lys Met	560	565	570
Leu Arg Arg Lys Glu Pro Ile Thr Leu Glu Ala Met Glu Thr Asn	575	580	585
Ile Ile Pro Leu Gly Glu Val Val Gly Glu Asp Pro Met Ala Glu	590	595	600
Leu Glu Ile Pro Ser Arg Ser Phe Tyr Arg Gln Asn Gly Glu Pro	605	610	615
Tyr Ile Gly Lys Val Lys Ala Ser Val Thr Phe Leu Asp Pro Arg	620	625	630
Asn Ile Ser Thr Ala Thr Ala Ala Gln Thr Asp Leu Asn Phe Ile	635	640	645
Asn Asp Glu Gly Asp Thr Phe Pro Leu Arg Thr Tyr Gly Met Phe	650	655	660
Ser Val Asp Phe Arg Asp Glu Val Thr Ser Glu Pro Leu Asn Ala	665	670	675
Gly Lys Val Lys Val His Leu Asp Ser Thr Gln Val Lys Met Pro	680	685	690
Glu His Ile Ser Thr Val Lys Leu Trp Ser Leu Asn Pro Asp Thr	695	700	705
Gly Leu Trp Glu Glu Glu Gly Asp Phe Lys Phe Glu Asn Gln Arg	710	715	720
Arg Asn Lys Arg Glu Asp Arg Thr Phe Leu Val Gly Asn Leu Glu	725	730	735
Ile Arg Glu Arg Arg Leu Phe Asn Leu Asp Val Pro Glu Ser Arg	740	745	750
Arg Cys Phe Val Lys Val Arg Ala Tyr Arg Ser Glu Arg Phe Leu	755	760	765
Pro Ser Glu Gln Ile Gln Gly Val Val Ile Ser Val Ile Asn Leu	770	775	780
Glu Pro Arg Thr Gly Phe Leu Ser Asn Pro Arg Ala Trp Gly Arg	785	790	795
Phe Asp Ser Val Ile Thr Gly Pro Asn Gly Ala Cys Val Pro Ala	800	805	810
Phe Cys Asp Asp Gln Ser Pro Asp Ala Tyr Ser Ala Tyr Val Leu	815	820	825
Ala Ser Leu Ala Gly Glu Glu Leu Gln Ala Val Glu Ser Ser Pro	830	835	840

Lys Phe Asn Pro Asn Ala Ile Gly Val	Pro Gln Pro Tyr Leu Asn
845	850 855
Lys Leu Asn Tyr Arg Arg Thr Asp His	Glu Asp Pro Arg Val Lys
860	865 870
Lys Thr Ala Phe Gln Ile Ser Met Ala	Lys Pro Arg Pro Asn Ser
875	880 885
Ala Glu Glu Ser Asn Gly Pro Ile Tyr	Ala Phe Glu Asn Leu Arg
890	895 900
Ala Cys Glu Glu Ala Pro Pro Ser Ala	Ala His Phe Arg Phe Tyr
905	910 915
Gln Ile Glu Gly Asp Arg Tyr Asp Tyr	Asn Thr Val Pro Phe Asn
920	925 930
Glu Asp Asp Pro Met Ser Trp Thr Glu	Asp Tyr Leu Ala Trp Trp
935	940 945
Pro Lys Pro Met Glu Phe Arg Ala Cys	Tyr Ile Lys Val Lys Ile
950	955 960
Val Gly Pro Leu Glu Val Asn Val Arg	Ser Arg Asn Met Gly Gly
965	970 975
Thr His Arg Arg Thr Val Gly Lys Leu	Tyr Gly Ile Arg Asp Val
980	985 990
Arg Ser Thr Arg Asp Arg Asp Gln Pro	Asn Val Ser Ala Ala Cys
995	1000 1005
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Asp Arg Thr Leu Val Lys Val Ile Pro	Gln Gly Ser Cys Arg Arg
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Ala Ser Val Asn Pro Met Leu His Glu	Tyr Leu Val Asn His Leu
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Pro Leu Ala Val Asn Asn Asp Thr Ser	Glu Tyr Thr Met Leu Ala
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Pro Leu Asp Pro Leu Gly His Asn Tyr	Gly Ile Tyr Thr Val Thr
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Asp Gln Asp Pro Arg Thr Ala Lys Glu	Ile Ala Leu Gly Arg Cys
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Phe Asp Gly Thr Ser Asp Gly Ser Ser	Arg Ile Met Lys Ser Asn
1100	1105 1110
Val Gly Val Ala Leu Thr Phe Asn Cys	Val Glu Arg Gln Val Gly
1115	1120 1125
Arg Gln Ser Ala Phe Gln Tyr Leu Gln	Ser Thr Pro Ala Gln Ser
1130	1135 1140
Pro Ala Ala Gly Thr Val Gln Gly Arg	Val Pro Ser Arg Arg Gln
1145	1150 1155

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<210> 126  
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<220>  
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<210> 127  
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<211> 438

<212> PRT

<213> Homo sapiens

<400> 129

Met	Tyr	Leu	Ser	Arg	Ser	Leu	Ser	Ile	His	Ala	Leu	Trp	Val	Tyr
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Val	Ser	Ser	Val	Met	Gln	Pro	Tyr	Pro	Leu	Val	Trp	Gly	His	Tyr
			20						25					30
Asp	Leu	Cys	Lys	Thr	Gln	Ile	Tyr	Thr	Glu	Gly	Lys	Val	Trp	
			35						40					45
Asp	Tyr	Met	Ala	Cys	Gln	Pro	Glu	Ser	Thr	Asp	Met	Thr	Lys	Tyr
			50						55					60
Leu	Lys	Val	Lys	Leu	Asp	Pro	Pro	Asp	Ile	Thr	Cys	Gly	Asp	Pro
			65						70					75
Pro	Glu	Thr	Phe	Cys	Ala	Met	Gly	Asn	Pro	Tyr	Met	Cys	Asn	Asn
			80						85					90
Glu	Cys	Asp	Ala	Ser	Thr	Pro	Glu	Leu	Ala	His	Pro	Pro	Glu	Leu
			95						100					105
Met	Phe	Asp	Phe	Glu	Gly	Arg	His	Pro	Ser	Thr	Phe	Trp	Gln	Ser
			110						115					120
Ala	Thr	Trp	Lys	Glu	Tyr	Pro	Lys	Pro	Leu	Gln	Val	Asn	Ile	Thr



	125	130	135
Leu Ser Trp Ser	Lys Thr Ile Glu Leu	Thr Asp Asn Ile Val	Ile
	140	145	150
Thr Phe Glu Ser	Gly Arg Pro Asp Gln	Met Ile Leu Glu Lys	Ser
	155	160	165
Leu Asp Tyr Gly	Arg Thr Trp Gln Pro	Tyr Gln Tyr Tyr Ala	Thr
	170	175	180
Asp Cys Leu Asp	Ala Phe His Met Asp	Pro Lys Ser Val Lys	Asp
	185	190	195
Leu Ser Gln His	Thr Val Leu Glu Ile	Ile Cys Thr Glu Glu	Tyr
	200	205	210
Ser Thr Gly Tyr	Thr Thr Asn Ser Lys	Ile Ile His Phe Glu	Ile
	215	220	225
Lys Asp Arg Phe	Ala Leu Phe Ala Gly	Pro Arg Leu Arg Asn	Met
	230	235	240
Ala Ser Leu Tyr	Gly Gln Leu Asp Thr	Thr Lys Lys Leu Arg	Asp
	245	250	255
Phe Phe Thr Val	Thr Asp Leu Arg Ile	Arg Leu Leu Arg Pro	Ala
	260	265	270
Val Gly Glu Ile	Phe Val Asp Glu Leu	His Leu Ala Arg Tyr	Phe
	275	280	285
Tyr Ala Ile Ser	Asp Ile Lys Val Arg	Gly Arg Cys Lys Cys	Asn
	290	295	300
Leu His Ala Thr	Val Cys Val Tyr Asp	Asn Ser Lys Leu Thr	Cys
	305	310	315
Glu Cys Glu His	Asn Thr Thr Gly Pro	Asp Cys Gly Lys Cys	Lys
	320	325	330
Lys Asn Tyr Gln	Gly Arg Pro Trp Ser	Pro Gly Ser Tyr Leu	Pro
	335	340	345
Ile Pro Lys Gly	Thr Ala Asn Thr Cys	Ile Pro Ser Ile Ser	Ser
	350	355	360
Ile Gly Thr Asn	Val Cys Asp Asn Glu	Leu Leu His Cys Gln	Asn
	365	370	375
Gly Gly Thr Cys	His Asn Asn Val Arg	Cys Leu Cys Pro Ala	Ala
	380	385	390
Tyr Thr Gly Ile	Leu Cys Glu Lys Leu	Arg Cys Glu Glu Ala	Gly
	395	400	405
Ser Cys Gly Ser	Asp Ser Gly Gln Gly	Ala Pro Pro His Gly	Thr
	410	415	420
Pro Ala Leu Leu	Leu Leu Thr Thr Leu	Leu Gly Thr Ala Ser	Pro
	425	430	435
Leu Val Phe			

<210> 130  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 130  
tcgattatgg acgaacatgg cagc 24

<210> 131  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 131  
ttctgagatc cctcatcctc 20

<210> 132  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 132  
aggttcaggg acagcaagtt tggg 24

<210> 133  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 133  
tttgctggac ctcggtacg gaattggctt cctctacgg acagctggat 50

<210> 134  
<211> 1493  
<212> DNA  
<213> Homo sapiens

<400> 134  
cccacgcgtc cgggtgacct gggccgagcc ctcccgtcg gctaagattg 50  
ctgaggaggc ggcgggtagc tggcaggcgc cgacttcga aggcgcgct 100  
ccgggcgagg tgtctcatg acttctcttg tggaccatgt ccgtgatctt 150  
ttttgcctcg gtggtacggg taagggatgg actgccctc tcagcctcta 200  
ctgattttta ccacacccaa gatttttttg aatggaggag acggctcaag 250  
agtttagcct tgcgactggc ccagtatcca ggtcgagggt ctgcagaagg 300

ttgtgacttt agtatacatt tttcttcttt cggggacgtg gctcgcatgg 350  
 ctatctgctc ctgccagtgt ccagcagcca tggccttctg cttcctggag 400  
 acccttggtt gggaattcac agcttctctat gacactacct gcattggcct 450  
 agcctccagg ccatagcgtt ttcttgagtt tgacagcatc attcagaaa 500  
 tgaagtggca ttttaactat gtaagttcct ctcagatgga gtgcagcttg 550  
 gaaaaaattc aggaggagct caagttgcag cctccagcgg ttctcactct 600  
 ggaggacaca gatgtggcaa atgggggtgat gaatggtcac acaccgatgc 650  
 acttgagacc tgctcctaatt tccgaatgg aaccagtgac agccctgggt 700  
 atcctctccc tcattctcaa catcatgtgt gctgccctga atctcattcg 750  
 aggagttcac cttgcagaac attctttaca ggatccaagg agctggttct 800  
 gctggttgga ccaaacctcg tgagccagcc acccctgacc caaatgagga 850  
 gagctctgat tctcccatcc gggagcagtg atgtcaaact tctgctgctg 900  
 gggaaatctc atcagcaggg agcctgtgga aaagggcatg tcagtgaaa 950  
 ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000  
 gctgttgccc acaagcgctt tttatttagg gtaaaattaa caaatccatt 1050  
 ctattcctct gaccatgct tagtacatat gacctttaac ccttacattt 1100  
 atatgattct ggggttgctt cagaagtgtt attcatgaa tcattcatat 1150  
 gatttgatcc ccaggattc tattttgttt aatgggcttt tctactaaaa 1200  
 gcataaaaata ctgaggctga tttagtcagg gcaaaaccat ttactttaca 1250  
 tattcgTTTT caatacttgc tggtcatggt acacaagctt cttacggttt 1300  
 tcttgtaaca ataaatattt tgagtaaata atgggtacat ttttaaaaa 1350  
 tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400  
 tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450  
 aaatctaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135

<211> 228

<212> PRT

<213> Homo sapiens

<400> 135

Met	Ser	Val	Ile	Phe	Phe	Ala	Cys	Val	Val	Arg	Val	Arg	Asp	Gly
1				5						10				15

Leu	Pro	Leu	Ser	Ala	Ser	Thr	Asp	Phe	Tyr	His	Thr	Gln	Asp	Phe
				20				25						30

Leu	Glu	Trp	Arg	Arg	Arg	Leu	Lys	Ser	Leu	Ala	Leu	Arg	Leu	Ala
				35				40						45

Gln	Tyr	Pro	Gly	Arg	Gly	Ser	Ala	Glu	Gly	Cys	Asp	Phe	Ser	Ile	
				50					55					60	
His	Phe	Ser	Ser	Phe	Gly	Asp	Val	Ala	Cys	Met	Ala	Ile	Cys	Ser	
				65					70					75	
Cys	Gln	Cys	Pro	Ala	Ala	Met	Ala	Phe	Cys	Phe	Leu	Glu	Thr	Leu	
				80					85					90	
Trp	Trp	Glu	Phe	Thr	Ala	Ser	Tyr	Asp	Thr	Thr	Cys	Ile	Gly	Leu	
				95					100					105	
Ala	Ser	Arg	Pro	Tyr	Ala	Phe	Leu	Glu	Phe	Asp	Ser	Ile	Ile	Gln	
				110					115					120	
Lys	Val	Lys	Trp	His	Phe	Asn	Tyr	Val	Ser	Ser	Ser	Gln	Met	Glu	
				125					130					135	
Cys	Ser	Leu	Glu	Lys	Ile	Gln	Glu	Glu	Leu	Lys	Leu	Gln	Pro	Pro	
				140					145					150	
Ala	Val	Leu	Thr	Leu	Glu	Asp	Thr	Asp	Val	Ala	Asn	Gly	Val	Met	
				155					160					165	
Asn	Gly	His	Thr	Pro	Met	His	Leu	Glu	Pro	Ala	Pro	Asn	Phe	Arg	
				170					175					180	
Met	Glu	Pro	Val	Thr	Ala	Leu	Gly	Ile	Leu	Ser	Leu	Ile	Leu	Asn	
				185					190					195	
Ile	Met	Cys	Ala	Ala	Leu	Asn	Leu	Ile	Arg	Gly	Val	His	Leu	Ala	
				200					205					210	
Glu	His	Ser	Leu	Gln	Asp	Pro	Arg	Ser	Trp	Phe	Cys	Trp	Leu	Asp	
				215					220					225	

Gln Thr Ser

<210> 136

<211> 239

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 39, 61, 143, 209

<223> unknown base

<400> 136

tgcttcctg agaccctgtg gtgggaattc acagcttcnt atgacactac 50

ctgcattggc ntagecctcca ggccatacgc ttttcttgag tttagacagca 100

tcattcagaa agtgaagtgg cattttaact atgtaagttc cntncagatg 150

gagtgacgtc tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200

ggttctcant atggaggaca cagatgtggc aaatggggg 239

<210> 137

<211> 2300

<212> DNA

<213> Homo sapiens

<400> 137  
ctcagcggcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50  
acgtgagcgc gacccgacct taaagagtgg ggagcaaagg gaggacagag 100  
ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgctcc 150  
ggacgactgt atctgagccc cagactgccc cgagtttctg tcgcaggctg 200  
cgaggaaagg cccttaggct gggctctgggt gcttgcgggc ggcggtctcc 250  
tccccgctcg tcctccccgg gccagaggc acctcggctt cagtcatgct 300  
gagcagagta tggaagcacc tgactacgaa gtgctatccg tgcgagaaca 350  
gctattccac gagaggatcc gcgagtgtat tatatcaaca cttctgtttg 400  
caacactgta catcctctgc cacatcttcc tgacctgctt caagaagcct 450  
gctgagtcca ccacagtgga tgatgaagat gccaccgtca acaagattgc 500  
gctcgagctg tgcaccttta ccttgccaat tgccttgggt gctgtcctgc 550  
tcctgcccct ctccatcatc agcaatgagg tgctgctctc cctgcctcgg 600  
aactactaca tcagtggtt caacggctcc ctcatccatg gcctctggaa 650  
ccttgttttt ctcttcccca acctgtccct catcttctcc atgccctttg 700  
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ctgggcgggg tctatgagac agtggtgatg ttgatgtccc tcactctgct 800  
ggtgtcaggt atggtgtggg tggcatcagc cattgtggac aagaacaagg 850  
ccaacagaga gtcactctat gacttttggg agtactatct cccctaccto 900  
tactcatgca tctccttctt tggggttctg ctgctcctgg tgtgtactcc 950  
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cccggtctgt ggaagacctg gaggagcagc tgtactgctc agcctttgag 1050  
gaggcagccc tgacccgcag gatctgtaat cctacttctt gctggctgcc 1100  
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ggtgtcctca gttgtgggct tctatagctc tccactcttc cggagcctgc 1450  
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 gctcactcgc tttagacctgc tgggtgactt tggacgcttc aactggctgg 1600  
 gcaattttcta catttggttc ctctacaacg cagcctttgc aggcctcacc 1650  
 acactctgtc tgggtgaagac cttcactgca gctgtgctgg cagagctgat 1700  
 ccgggcccctt gggttggaaca gactgcgcgt gcccgctctc gggttccccc 1750  
 aggcacttag gaagaccag caccagtgc ctccagctgg gggtgggaag 1800  
 gaaaaaactg gacctgccca tctgtgcct aggcctggag ggaagcccaa 1850  
 ggctacttgg acctcaggac ctggaatctg agaggggtgg tggcagaggg 1900  
 gaggcagacc atctgcaact ttgcataatc tgagccagag tttgggacca 1950  
 ggacctcctg cttttccata ctttaactgt gcctcagcat ggggttagggc 2000  
 tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050  
 gcctcaactg tgttctgggc catcccccata gccatgttta catgatttga 2100  
 tgtgcaatag ggtggggtag gggcagggaa aggactgggc cagggcaggc 2150  
 tcggagata gattgtctcc ctgacctctg gcccagcaga gcctaagcac 2200  
 tgtgctatcc tggaggggct ttggaccacc tgaagacca aggggatagg 2250  
 gaggaggagg cttcagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138  
 <211> 489  
 <212> PRT  
 <213> Homo sapiens

<400> 138  
 Met Glu Ala Pro Asp Tyr Glu Val Leu Ser Val Arg Glu Gln Leu  
 1 5 10 15  
 Phe His Glu Arg Ile Arg Glu Cys Ile Ile Ser Thr Leu Leu Phe  
 20 25 30  
 Ala Thr Leu Tyr Ile Leu Cys His Ile Phe Leu Thr Arg Phe Lys  
 35 40 45  
 Lys Pro Ala Glu Phe Thr Thr Val Asp Asp Glu Asp Ala Thr Val  
 50 55 60  
 Asn Lys Ile Ala Leu Glu Leu Cys Thr Phe Thr Leu Ala Ile Ala  
 65 70 75  
 Leu Gly Ala Val Leu Leu Leu Pro Phe Ser Ile Ile Ser Asn Glu  
 80 85 90  
 Val Leu Leu Ser Leu Pro Arg Asn Tyr Tyr Ile Gln Trp Leu Asn  
 95 100 105  
 Gly Ser Leu Ile His Gly Leu Trp Asn Leu Val Phe Leu Phe Pro  
 110 115 120  
 Asn Leu Ser Leu Ile Phe Leu Met Pro Phe Ala Tyr Phe Phe Thr

	125	130	135
Glu Ser Glu Gly	Phe Ala Gly Ser Arg 140	Lys Gly Val Leu Gly Arg 145	Arg 150
Val Tyr Glu Thr	Val Val Met Leu Met 155	Leu Leu Thr Leu Leu Val 160	165
Leu Gly Met Val	Trp Val Ala Ser Ala 170	Ile Val Asp Lys Asn Lys 175	180
Ala Asn Arg Glu	Ser Leu Tyr Asp Phe 185	Trp Glu Tyr Tyr Leu Pro 190	195
Tyr Leu Tyr Ser	Cys Ile Ser Phe Leu 200	Gly Val Leu Leu Leu Leu 205	210
Val Cys Thr Pro	Leu Gly Leu Ala Arg 215	Met Phe Ser Val Thr Gly 220	225
Lys Leu Leu Val	Lys Pro Arg Leu Leu 230	Glu Asp Leu Glu Glu Gln 235	240
Leu Tyr Cys Ser	Ala Phe Glu Glu Ala 245	Ala Leu Thr Arg Arg Ile 250	255
Cys Asn Pro Thr	Ser Cys Trp Leu Pro 260	Leu Asp Met Glu Leu Leu 265	270
His Arg Gln Val	Leu Ala Leu Gln Thr 275	Gln Arg Val Leu Leu Glu 280	285
Lys Arg Arg Lys	Ala Ser Ala Trp Gln 290	Arg Asn Leu Gly Tyr Pro 295	300
Leu Ala Met Leu	Cys Leu Leu Val Leu 305	Thr Gly Leu Ser Val Leu 310	315
Ile Val Ala Ile	His Ile Leu Glu Leu 320	Leu Ile Asp Glu Ala Ala 325	330
Met Pro Arg Gly	Met Gln Gly Thr Ser 335	Leu Gly Gln Val Ser Phe 340	345
Ser Lys Leu Gly	Ser Phe Gly Ala Val 350	Ile Gln Val Val Leu Ile 355	360
Phe Tyr Leu Met	Val Ser Ser Val Val 365	Gly Phe Tyr Ser Ser Pro 370	375
Leu Phe Arg Ser	Leu Arg Pro Arg Trp 380	His Asp Thr Ala Met Thr 385	390
Gln Ile Ile Gly	Asn Cys Val Cys Leu 395	Leu Val Leu Ser Ser Ala 400	405
Leu Pro Val Phe	Ser Arg Thr Leu Gly 410	Leu Thr Arg Phe Asp Leu 415	420
Leu Gly Asp Phe	Gly Arg Phe Asn Trp 425	Leu Gly Asn Phe Tyr Ile 430	435
Val Phe Leu Tyr	Asn Ala Ala Phe Ala 440	Gly Leu Thr Thr Leu Cys 445	

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg		
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro		
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139  
 <211> 294  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 53, 57  
 <223> unknown base

<400> 139  
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 ggnttcttcc ccgctcgtcc tcccggggcc cagaggcacc tcggttccag 100  
 tcattgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150  
 gagaacacgt attccacgag aggatccgcg agtggtattat atcaacactt 200  
 ctgtttgcaa cactgtacat cctctgccac atcttctcga cccgcttcaa 250  
 gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140  
 <211> 526  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 197, 349  
 <223> unknown base

<400> 140  
 gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50  
 aggcgggtggt gcctgccott taaggcgagg gcgtccggac gactgtatct 100  
 gaggccccaga ctgccccgag tttctgtcgc aggtctgcgag gaaaggcccc 150  
 taggtgggt ctgggtgcttg gcggcgccgg cttctctccc gttgtcntcc 200  
 ccggggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250  
 cacctgacta cgaagtgeta tccgtgcgag aacagctatt ccacgagagg 300  
 atccgcgagt gtattatata aacactttctg tttgcaacac tgtacatcnt 350  
 ctgccacata ttctgaccc gcttcaagaa gcctgctgag ttaccacag 400  
 tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450



tttaccctgg caattgccct ggggtgctgc ctgctcctgc cctttccat 500

catcagcaat gaggtgctgc actccc 526

<210> 141

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 141

gactgtatct gagccccaga ctgc 24

<210> 142

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 142

tcagcaatga ggtgctgctc 20

<210> 143

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 143

tgaggaagat gaggacagg ttgg 24

<210> 144

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 144

tatggaagca cctgactacg aagtgtatc cgtgcgagaa cagctattcc 50

<210> 145

<211> 685

<212> DNA

<213> Homo sapiens

<400> 145

gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50

caaacctgtt ttggaattga ggaaacttct cttttgatct cagcccttgg 100

tggtccaggt cttcatgctg ctgtgggtga tattactggt cctggctcct 150

gtcagtgagc agttttgaag gacacccagg cccattattt tccatccagg 200

tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaaaca aatggtacca tcggtacctt 300  
 gggaagaaaa tactaagaga aaccccagac aatatccttg aggttcagga 350  
 atctggagag tacagatgcc aggccaggg ctcccctctc agtagccctg 400  
 tgcacttgga tttttcttca gagatgggat ttctctatcg tgcacaggct 450  
 aatgttgaa ctcctgggctc aagtgatctg ctcacctagg cctctcaaag 500  
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550  
 aaggagactc tgtggtttcg aggtgccggg caaaggcgga agtaacactg 600  
 aataatacta ttacaagaa tgataatgtc ctggcattcc ttaataaaag 650  
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 146  
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly  
 1 5 10 15  
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro  
 20 25 30  
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys  
 35 40 45  
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg  
 50 55 60  
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu  
 65 70 75  
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser  
 80 85 90  
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly  
 95 100 105  
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser  
 110 115 120  
 Asp Leu Leu Thr

<210> 147  
 <211> 1621  
 <212> DNA  
 <213> Homo sapiens

<400> 147  
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 ccccccggt gtgaggcggc ctcacagggc cgggtgggct ggcgagccga 100  
 cgcgcgcgcy gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaaccat ggctccgag aacctgagca ccttttgcoct gttgctgeta 200  
 tacctcatcg gggcggtgat tgccggacga gatttctata agatcttggg 250  
 ggtgcctcga agtgctccta taaaggatat taaaaaggcc tataggaaac 300  
 tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350  
 gagaaattcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400  
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450  
 atcagagctc coactggagac attttttcac acttcttttg ggattttggt 500  
 ttcatgtttg gaggaacccc tcgtcagcaa gacagaaata ttccaagagg 550  
 aagtgatatt attgtagatc tagaagtcac tttggaagaa gtatagtgcag 600  
 gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggctcct 650  
 ggcaaacgga agtgcaattg tcggcaagag atgcggacca cccagctggg 700  
 ccttgggcgc ttccaaatga cccaggaggt ggtctgogac gaatgcctta 750  
 atgtcaaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800  
 ggggtgagag acggcatgga gtaccccttt attggagaag gtgagcctca 850  
 cgtggatggg gagcctggag atttacgggt ccgaatcaaa gttgtcaagc 900  
 acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950  
 tcattagtgt agtcaactggt tggctttgag atggatatta ctcaacttga 1000  
 tggtcacaag gtacatattt cccgggataa gatcaccagg ccaggagcga 1050  
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatatc 1100  
 aagggtctct tgataatcac ttttgatgtg gatttttcaa aagaacagtt 1150  
 aacagaggaa gcgagagaag gtatcaaaca gctactgaaa caagggtcag 1200  
 tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250  
 gactttgttt aaaataagtg aataagcgat atttattatc tgcaagggtt 1300  
 ttttgtgtgt gtttttgttt ttattttcaa tatgcaagtt aggcttaatt 1350  
 tttttatcta atgatcatca tgaaatgaat aagagggctt aagaatttgt 1400  
 ccatttgcat tcggaaaaga atgaccagca aaagggttac taatacctct 1450  
 ccctttgggg atttaattgc tgggtctgcc gcttgagttt caagaattaa 1500  
 agctgcaaga ggactccagg agcaaaaaga acacaatata gaggggttga 1550  
 gttgttagca atttcattca aaatgccaac tggagaagtc tgttttttaa 1600  
 tacattttgt tgttattttt a 1621

<210> 148  
 <211> 358  
 <212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr
1				5					10					15
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu
				20					25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
				50					55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
				65					70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
				80					85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
				95					100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
				110					115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
				125					130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
				140					145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
				155					160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
				170					175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
				185					190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
				200					205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
				215					220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
				230					235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
				245					250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu
				260					265					270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val
				275					280					285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp
				290					295					300

Lys	Lys	Gly	Glu	Gly	Leu	Pro	Asn	Phe	Asp	Asn	Asn	Asn	Ile	Lys
				305					310					315
Gly	Ser	Leu	Ile	Ile	Thr	Phe	Asp	Val	Asp	Phe	Pro	Lys	Glu	Gln
				320					325					330
Leu	Thr	Glu	Glu	Ala	Arg	Glu	Gly	Ile	Lys	Gln	Leu	Leu	Lys	Gln
				335					340					345
Gly	Ser	Val	Gln	Lys	Val	Tyr	Asn	Gly	Leu	Gln	Gly	Tyr		
				350					355					

<210> 149

<211> 509

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445, 482

<223> unknown base

<400> 149

tgggaccagg gaaccccggtg ccccccgggtg gagngcctaa caggccgggtg 50

gntgcgaccg aagcggcggtg cggaggaggt tttgagatt tttggaacag 100

gacccggaca gaggaacat ggttccgcag aacntgagca cnttttgcct 150

gttgntgnta tacttcatcg gggcggtgat tgcgggacga gatttntata 200

agattttggg gtgcctngaa gtgcctnta taaaggatat taaaaggcc 250

tatagaaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300

acaagcccag gagaaattcc aggatttggg tgctgcttat gaggtntgt 350

cagatagtga gaaacggaaa cagtacgata attatgtga agaaggatta 400

aaagatggtn atcagagctc ccatggagac attttttcac acttntttgg 450

ggattttggt ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500

ttccaagag 509

<210> 150

<211> 1532

<212> DNA

<213> Homo sapiens

<400> 150

ggcagcaggc ggcggggcag tcgcgggatg cgcccgagg ccacagcctg 50

aggccctcag gtctctgag gtgtcgtgga ggaacctagc acctgccatc 100

ctcttcccca atttgcaact tccagcagct tttagccatg aggaggatgt 150

gaccgggact gattcaggag ccctctgaa gcatggagac tgtgtgtgatt 200

gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250

ggtgctgtgt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgattc taagcccatt gtggacctca ttggtgccat ggagacccag 350  
 tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccca 400  
 cattgagccc attctggaga atgaagactg gatcgaagat gcctcgggtc 450  
 tcatgtccca ctgcattgcc atcttgaaga tttgtcacac totgacagag 500  
 aagcttgttg ccatgacaat gggctctggg gccaatgatg agacttcagc 550  
 cagtgtcagc gacatcattg tgggtggcaa ggggatcagc cccagggtgg 600  
 atgatgtgtg gaagtogatg taccctccgt tggaccccaa actcctggac 650  
 goacggacga ctgocctgct cctgtctgtc agtcacctgg tgctgggtgac 700  
 aaggaatgoc tgccatctga cgggaggcct ggaactggatt gaccagtctc 750  
 tgtcggctgc tgaggagcat ttggaagtcc ttogagaagc agccctagct 800  
 totgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850  
 gtctgcaatt tagtgcctac aggcacagcag ctagccatga aggccctcgc 900  
 cgccatccct ggatggctca gcttagcctt ctactttttc ctatagagtt 950  
 agttgttttc caccgctgga gagttcagct gtgtgtgcat agtaaacgag 1000  
 gagatccccc tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050  
 gagtggcagt ctaatactac agttagggga gatgccattc actctctgca 1100  
 agaggagtag tgaactctgg tggaactgca gctttattta gctcacctag 1150  
 tgttttcaag aaaaattgag caccgtctaa gaaatcaaga ggtttcacat 1200  
 taaaattaga attctggcc tctctogac ggtagcaatg tgtggcaatt 1250  
 ctgatctgca ttttcagaag aggacaatca attgaaaact agtaggggtt 1300  
 tcttcttttg gcaagacttg tactctctca cctggcctgt ttcattttat 1350  
 tgtattatct gctgggtccc tgaggcgtct gggctctccc tctcccttgc 1400  
 aggtttgggt ttgaagctga ggaactacaa agttgatgat tcttttttta 1450  
 tctttatgcc tgcaatttta ctagctacc actaggtgga tagtaaat 1500  
 atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151

<211> 226

<212> PRT

<213> Homo sapiens

<400> 151

Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile  
 1 5 10 15

Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg  
 20 25 30

Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro

	35		40		45
Ile Val Asp Leu	Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser				
50	50		55		60
Glu Leu Glu Leu Asp Asp Val Val Ile Thr Asn Pro His Ile Glu					
65	70				75
Ala Ile Leu Glu Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu					
80	85				90
Met Ser His Cys Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr					
95	100				105
Glu Lys Leu Val Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys					
110	115				120
Thr Ser Ala Ser Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile					
125	130				135
Ser Pro Arg Val Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu					
140	145				150
Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser					
155	160				165
Val Ser His Leu Val Leu Val Thr Arg Asn Ala Cys His Leu Thr					
170	175				180
Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu					
185	190				195
His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp					
200	205				210
Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala					
215	220				225
Ile					

<210> 152

<211> 1027

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 1017, 1020

<223> unknown base

<400> 152

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tcgcgcgtgt ccccaccact gcagccatga tctccttaac ggacacgcag 100

aaaattggaa tgggattaac aggatttgga gtgtttttcc tgttcttttg 150

aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200

ttgtagccgg cttggcctttt gtaattgggt tagaaagaac attcagattc 250

ttcttccaaa aacataaaat gaaagctaca gggttttttc tgggtggtgt 300

attttagtc cttattggtt ggcctttgat aggcattgat ttogaaattt 350  
atggattttt tctcttggtc aggggcttct ttctgtctgt tgttggtttt 400  
attagaagag tgccagtcct tggatccctc ctaaattttac ctggaattag 450  
atcattttgta gataaagttg gagaagcaa caatatggta taacaacaag 500  
tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550  
agaattatca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600  
tacaggagtt taaaacgtat agcctacaaa gtaccagcag caaattagca 650  
aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700  
caagcaaat gagagagggt aaatccatgt taatgatgct taagaaactc 750  
ttgaaggcta tttgtgttgt ttttccacaa tgtgcgaaac tcagccatcc 800  
ttagagaact gtggtgcctg tttcttttct ttttattttg aaggctcagg 850  
agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900  
tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgatttga 950  
ttgtgtcatt ttaaagtatt aaaaccaagg aaacccaat tttgatgtat 1000  
ggattacttt ttttngnccn cagggcc 1027

<210> 153  
<211> 138  
<212> PRT  
<213> Homo sapiens

<220>  
<221> N-myristoylation Sites  
<222> 11-16, 51-56 and 116-121  
<223> N-myristoylation Sites.

<220>  
<221> Transmembrane domains  
<222> 12-30, 33-52, 69-89 and 93-109  
<223> Transmembrane domains

<220>  
<221> Aminoacyl-transfer RNA Synthetases.  
<222> 49-59  
<223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153  
Met Ile Ser Leu Thr Asp Thr Gln Lys Ile Gly Met Gly Leu Thr  
1 5 10 15  
Gly Phe Gly Val Phe Phe Leu Phe Phe Gly Met Ile Leu Phe Phe  
20 25 30  
Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly  
35 40 45  
Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe  
50 55 60



Gln	Lys	His	Lys	Met	Lys	Ala	Thr	Gly	Phe	Phe	Leu	Gly	Gly	Val
				65					70					75
Phe	Val	Val	Leu	Ile	Gly	Trp	Pro	Leu	Ile	Gly	Met	Ile	Phe	Glu
				80					85					90
Ile	Tyr	Gly	Phe	Phe	Leu	Leu	Phe	Arg	Gly	Phe	Phe	Pro	Val	Val
				95					100					105
Val	Gly	Phe	Ile	Arg	Arg	Val	Pro	Val	Leu	Gly	Ser	Leu	Leu	Asn
				110					115					120
Leu	Pro	Gly	Ile	Arg	Ser	Phe	Val	Asp	Lys	Val	Gly	Glu	Ser	Asn
				125					130					135

Asn Met Val

<210> 154  
 <211> 405  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 66  
 <223> unknown base

<400> 154  
 gaagacgtgg cggctctcgc ctgggctgtt tcccggttc attctcccg 50  
 actcagcttc ccacntggg ctttcgagg tgccttcgcc gctgtccca 100  
 ccactgcagc catgatctcc ttaacggaca cgcagaaaat tggaatggga 150  
 ttaaccggat ttggagtgtt ttctctgttc ttggaatga ttctctttt 200  
 tgacaaagca ctactggcta ttggaatgt tttatttga gccggcttgg 250  
 ctttttgaat tggtttagaa agaacattca gattctctt ccaaaaacat 300  
 aaaatgaaag ctacaggttt tttctgggt ggtgtattt tagtcttat 350  
 tggttggcct ttgataggca tgatcttoga aatttatgga tttttctct 400  
 tgttc 405

<210> 155  
 <211> 1781  
 <212> DNA  
 <213> Homo sapiens

<400> 155  
 ggcacgaggc tgaaccacgc cggctccatc tcagcttctg gtttctaagt 50  
 ccatgtgcca aaggctgcca ggaaggagac gccttctga gtctggatc 100  
 tttctctctt ttggaaatct ttgactgtgg gtagtattt atttctgaat 150  
 aagagcgtcc acgcatcatg gacctcggg gactgtgaa gtctcagttc 200  
 ctgtgccacc tggctctctg ctacgtcttt attgcctcag ggctaatacat 250

caacaccatt cagctcttca ctctctctct ctggccatt aacaagcagc 300  
 tcttccggaa gatcaactgc agactgtcct attgcatctc aagccagctg 350  
 gtgatgtctg tggagtgggtg gtcgggcacg gaatgcacca tcttcacgga 400  
 cccgcgcgcc tacctcaagt atgggaagga aaatgccatc gtggttctca 450  
 accacaagtt tgaaattgac tttctgtgtg gctggagcct gtcggaacgc 500  
 tttgggtgtg tagggggctc caaggtcctg gccaaagaa agctggccta 550  
 tgtcccaatt atcggtgga tgtgttactt caccgagatg gtcttctgtt 600  
 cgcgaagtg ggagcaggat cgcaagacgg ttgccaccag tttgcagcac 650  
 ctccgggact accccgagaa gtatttttct ctgattcaat gtgagggcac 700  
 acggttccag gagaagaagc atgagatcag catgcagggt gcccgggcca 750  
 aggggtctgc tcgcctcaag catcacctgt tgccacgaac caagggcttc 800  
 gccatcaccg tgaggagctt gagaaatgta gtttcagctg tatatgactg 850  
 tacactcaat ttcagaaata atgaaaatcc aacactgctg ggagtcttaa 900  
 acggaaagaa ataccatgca gatttgtatg ttagggagat cccactggaa 950  
 gacatccctg aagacgatga cagtgctcgc gcctggctgc acaagctcta 1000  
 ccaggagaag gatgccttctc aggaggagta ctacagacg ggcaccttcc 1050  
 cagagacgcc catggtgccc ccccgccggc cctggaccct cgtgaactgg 1100  
 ctgttttggg cctcgtggtg gctctacctt ttcttccagt tctcgttcag 1150  
 catgatcagg agcgggtctt cctgacgctg gccagcttc atcctcgtct 1200  
 tcttttggc ctccgtggga gttcgatgga tgattggtg gacggaaatt 1250  
 gacaaggctc ctgcctacgg caactctgac agcaagcaga aactgaatga 1300  
 ctgactcagg gaggtgtcac catcogaagg gaaccttggg gaactgggtg 1350  
 cctctgcata tctctcttag tgggacacgg tgacaaaggc tgggtgagcc 1400  
 cctgctgggc acggcgggaag tcacgacctc tccagccagg gactctggtc 1450  
 tcaaggccgg atggggagga agatgttttg taatcttttt ttccccatgt 1500  
 gctttatgtg gctttggttt tctttttgtg cgagtgtgtg tgagaatggc 1550  
 tgtgtgtgga gtgtgaactt tgtttgtgta tcatagaaag ggtatttttag 1600  
 gctgcagggg agggcagggc tggggacoga aggggacaaag ttcccccttc 1650  
 atccttttgt gctgagtttt ctgtaacctt tggttgccag agataaagtg 1700  
 aaaagtgtt taggtgagat gactaaatta tgcctccaag aaaaaaaaaa 1750  
 taaagtgtt ttctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378  
 <212> PRT  
 <213> Homo sapiens

<400> 156

Met	Asp	Leu	Ala	Gly	Leu	Leu	Lys	Ser	Gln	Phe	Leu	Cys	His	Leu
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Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr
				20					25					30
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu
				35					40					45
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln
				50					55					60
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile
				65					70					75
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala
				80					85					90
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly
				95					100					105
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val
				110					115					120
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met
				125					130					135
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln
				140					145					150
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr
				155					160					165
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe
				170					175					180
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys
				185					190					195
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly
				200					205					210
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val
				215					220					225
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu
				230					235					240
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val
				245					250					255
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys
				260					265					270
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln
				275					280					285
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val

290	295	300
Pro Pro Arg Arg Pro Trp Thr Leu Val	Asn Trp Leu Phe Trp	Ala
305	310	315
Ser Leu Val Leu Tyr Pro Phe Phe Gln	Phe Leu Val Ser Met Ile	
320	325	330
Arg Ser Gly Ser Ser Leu Thr Leu Ala	Asn Phe Ile Leu Val Phe	
335	340	345
Phe Val Ala Ser Val Gly Val Arg Trp	Met Ile Gly Val Thr Glu	
350	355	360
Ile Asp Lys Gly Ser Ala Tyr Gly Asn	Ser Asp Ser Lys Gln Lys	
365	370	375
Leu Asn Asp		

<210> 157  
 <211> 1849  
 <212> DNA  
 <213> Homo sapiens

<400> 157  
 ctgaggcggc ggtagcatgg aggggggagag tacgtcggcg gtgctctcgg 50  
 gcttttgctg cggcgcactc gctttccagc acctcaacac ggactcggac 100  
 acggaagggt ttcttcttgg ggaagtaaaa ggtgaagcca agaagacgat 150  
 tactgattcc caaatggatg atgttgaagt tgtttatata attgacattc 200  
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250  
 gaagtaaatg agcaagcact gaagaaaata ttatcaaatg tcaaaaagaa 300  
 tgtggtaggt tggtaacaat tccgtcgtca ttcagatcag atcatgacgt 350  
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccaa 400  
 gaccttgttt ttctgctatt aacaccaagt ataataacag aaagctgcto 450  
 tactcatcga ctggaacatt ccttatataa acctcaaaaa ggacttttct 500  
 acagggtagc tttagtggtt gccaatctgg gcattgtctga acaactgggt 550  
 tataaaactg tatcagggtc ctgtatgtcc actggtttta gccgagcagt 600  
 acaaacacac agctctaata tttttgaaga agatggatcc ttaaaggagg 650  
 tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700  
 atatgcaaaa aagtgaaga cagtgaacaa gcagtagata aactagtaaa 750  
 ggatgtaaa agattaaaac gagaattga gaaaaggaga ggagcacaga 800  
 ttcaggcagc aagagagaag aacatccaaa aagacctca ggagaacatt 850  
 tttctttgtc aggcattacg gacctttttt ccaaatctct aatttcttca 900  
 ttcattgtgt atgtctttaa aaaatagaca tgtttctaaa agtagctgta 950

actacaacca ccattctgat gtagtagaca atctgacctt aatggtagaa 1000  
 cacactgaca ttctgaagc tagtccagct agtacaccac aaatcattaa 1050  
 gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcggt 1100  
 tgttagatag acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150  
 caagataaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200  
 aaagatgaag ggttttggtg aatattcacg gtctcctaca ttttgatcct 1250  
 tttaacctta caaggagatt tttttatttg gctgatgggt aaagccaaac 1300  
 atttctattg tttttactat gttgagctac ttgcagtaag ttcatttgtt 1350  
 tttactatgt tcacctgttt gcagtaatac acagataaact cttagtgcatt 1400  
 ttacttcaca aagtactttt tcaaacatca gatgctttta tttccaaacc 1450  
 tttttttcac ctttacttaa gttgttgagg ggaaggotta cacagacaca 1500  
 ttctttagaa ttggaaggt gagaccaggc acagtggctc acacctgtaa 1550  
 tcccagcact tagggaagac aagtcaggag gattgattga agctaggagt 1600  
 tagagaccag cctgggcaac gtattgagac catgtctatt aaaaaataaa 1650  
 atggaaaagc aagaatagcc ttattttcaa aatatgaaa gaaatttata 1700  
 tgaaaattta tctgagtcatt taaaattctc cttaagtgat acttttttag 1750  
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 aaatttgcaa aacatcatct aaaattttaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158

<211> 409

<212> PRT

<213> Homo sapiens

<400> 158

Met Glu Gly Glu Ser Thr Ser Ala Val Leu Ser Gly Phe Val Leu  
 1 5 10

Gly Ala Leu Ala Phe Gln His Leu Asn Thr Asp Ser Asp Thr Glu  
 20 25 30

Gly Phe Leu Leu Gly Glu Val Lys Gly Glu Ala Lys Asn Ser Ile  
 35 40 45

Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp  
 50 55 60

Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn  
 65 70 75

Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser  
 80 85 90

Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His  
 95 100 105

Ser	Asp	Gln	Ile	Met	Thr	Phe	Arg	Glu	Arg	Leu	Leu	His	Lys	Asn	
				110					115					120	
Leu	Gln	Glu	His	Phe	Ser	Asn	Gln	Asp	Leu	Val	Phe	Leu	Leu	Leu	
				125					130					135	
Thr	Pro	Ser	Ile	Ile	Thr	Glu	Ser	Cys	Ser	Thr	His	Arg	Leu	Glu	
				140					145					150	
His	Ser	Leu	Tyr	Lys	Pro	Gln	Lys	Gly	Leu	Phe	His	Arg	Val	Pro	
				155					160					165	
Leu	Val	Val	Ala	Asn	Leu	Gly	Met	Ser	Glu	Gln	Leu	Gly	Tyr	Lys	
				170					175					180	
Thr	Val	Ser	Gly	Ser	Cys	Met	Ser	Thr	Gly	Phe	Ser	Arg	Ala	Val	
				185					190					195	
Gln	Thr	His	Ser	Ser	Lys	Phe	Phe	Glu	Glu	Asp	Gly	Ser	Leu	Lys	
				200					205					210	
Glu	Val	His	Lys	Ile	Asn	Glu	Met	Tyr	Ala	Ser	Leu	Gln	Glu	Glu	
				215					220					225	
Leu	Lys	Ser	Ile	Cys	Lys	Lys	Val	Glu	Asp	Ser	Glu	Gln	Ala	Val	
				230					235					240	
Asp	Lys	Leu	Val	Lys	Asp	Val	Asn	Arg	Leu	Lys	Arg	Glu	Ile	Glu	
				245					250					255	
Lys	Arg	Arg	Gly	Ala	Gln	Ile	Gln	Ala	Ala	Arg	Glu	Lys	Asn	Ile	
				260					265					270	
Gln	Lys	Asp	Pro	Gln	Glu	Asn	Ile	Phe	Leu	Cys	Gln	Ala	Leu	Arg	
				275					280					285	
Thr	Phe	Phe	Pro	Asn	Ser	Glu	Phe	Leu	His	Ser	Cys	Val	Met	Ser	
				290					295					300	
Leu	Lys	Asn	Arg	His	Val	Ser	Lys	Ser	Ser	Cys	Asn	Tyr	Asn	His	
				305					310					315	
His	Leu	Asp	Val	Val	Asp	Asn	Leu	Thr	Leu	Met	Val	Glu	His	Thr	
				320					325					330	
Asp	Ile	Pro	Glu	Ala	Ser	Pro	Ala	Ser	Thr	Pro	Gln	Ile	Ile	Lys	
				335					340					345	
His	Lys	Ala	Leu	Asp	Leu	Asp	Asp	Arg	Trp	Gln	Phe	Lys	Arg	Ser	
				350					355					360	
Arg	Leu	Leu	Asp	Thr	Gln	Asp	Lys	Arg	Ser	Lys	Ala	Asn	Thr	Gly	
				365					370					375	
Ser	Ser	Asn	Gln	Asp	Lys	Ala	Ser	Lys	Met	Ser	Ser	Pro	Glu	Thr	
				380					385					390	
Asp	Glu	Glu	Ile	Glu	Lys	Met	Lys	Gly	Phe	Gly	Glu	Tyr	Ser	Arg	
				395					400					405	
Ser	Pro	Thr	Phe												

<210> 159  
 <211> 2651  
 <212> DNA  
 <213> Homo sapiens

<400> 159  
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 cgcgcgcgc acacctctgc gtccccgcgc cgcctgccac ccttccctcc 150  
 ttccccgcgt cccgcctctgc cgcgcagtc agcttgccgc gttcgtctgc 200  
 ccgcgaaacc ccgaggtcac cagccgcgc ctctgcttcc ctggccgcgc 250  
 cgcgcctcc acgcctcct tctccctgc ccgcgcctt ggcacgggg 300  
 accgttgct gaagcgcgc ccagctctac ttttcgcgc cgtctcctc 350  
 cgcctgctgc cctcttcac caactccaac tcttctccc tccagctcca 400  
 ctgcgtagtc ccgactccg ccagccctgc gccgcgtgc gtacgcgcgc 450  
 ttccctctgc gtcccaaagg tgggaacgc tccgccccgc ccgcacccat 500  
 ggcaagcttc ggctgcccc cgtctctctg caccctggca gtgctcagc 550  
 ccgcgcgtct ggctgccgc ctcaagtgc aaagtgtctt ggaagtgcgc 600  
 cgtctttacg tgtccaaagg ctccaacaag aacgatgcc cctccacgc 650  
 gatcaacggt gatcattga agatctgtcc ccagggttct acctgctgt 700  
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 agtgtgtgc gcgaacagtc caatcatttg caagctgtct ttgcttcac 800  
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 aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900  
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 agatgtccct cgcgaattga agctccaggt tactcgtgct ttttagcag 1150  
 ccgctacttt cgtcgaaggc ttacgcgttg cgggagatgt cgtgagcaag 1200  
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 actactgctc aaacatcatg agaggctgtt tggccaacca aggggatctc 1350  
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 cagaaggttt tccagggatg tggacccccc aagccctccc cagctggagc 1550  
 aatttctcgt tccatctctg aaagtgcctt cagtgcctgc ttcagaccac 1600  
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 ctcccttcgc agcaacgttt gcaacgatga gaggatggct gcaggaaacg 1750  
 gcaatgagga tgactgttgg aatgggaaa gcaaaagcag gtacctgttt 1800  
 gcagtgacag gaaatggatt agccaaccag ggcaacaacc cagaggtcca 1850  
 ggttgacacc agcaaaccag acatactgat ccttcgtcaa atcatggctc 1900  
 ttocagtgat gaccagcaag atgaagaatg catacaatgg gaacgcagtg 1950  
 gacttctttg atatcagtg tgaagtagt ggagaaggaa gtggaagtgg 2000  
 ctgtgagtat cagcagtgcc cttcagagtt tgactacaat gccactgacc 2050  
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 ggggcacagg cctacctcct cactgtcttc tgcatcttgt tctgtgttat 2150  
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 actgtgcatt gagttggttc ctgctcccc aaacctgtt aaacgtggct 2400  
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<210> 160

<211> 556

<212> PRT

<213> Homo sapiens

<400> 160

Met	Ala	Arg	Phe	Gly	Leu	Pro	Ala	Leu	Leu	Cys	Thr	Leu	Ala	Val
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Leu	Ser	Ala	Ala	Leu	Leu	Ala	Ala	Glu	Leu	Lys	Ser	Lys	Ser	Cys
				20					25					30
Ser	Glu	Val	Arg	Arg	Leu	Tyr	Val	Ser	Lys	Gly	Phe	Asn	Lys	Asn



35										40					45				
Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys					
				50					55					60					
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr					
				65					70					75					
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln					
				80					85					90					
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe					
				95					100					105					
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu					
				110					115					120					
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn					
				125					130					135					
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr					
				140					145					150					
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp					
				155					160					165					
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr					
				170					175					180					
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu					
				185					190					195					
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln					
				200					205					210					
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu					
				215					220					225					
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro					
				230					235					240					
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser					
				245					250					255					
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys					
				260					265					270					
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp					
				275					280					285					
Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu					
				290					295					300					
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile					
				305					310					315					
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser					
				320					325					330					
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys					
				335					340					345					
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala					

350	355	360
Phe Ser Ala Arg	Phe Arg Pro His His	Pro Glu Glu Arg Pro Thr
365	370	375
Thr Ala Ala Gly	Thr Ser Leu Asp Arg	Leu Val Thr Asp Val Lys
380	385	390
Glu Lys Leu Lys	Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro Ser
395	400	405
Asn Val Cys Asn Asp	Glu Arg Met Ala	Ala Gly Asn Gly Asn Glu
410	415	420
Asp Asp Cys Trp	Asn Gly Lys Gly Lys	Ser Arg Tyr Leu Phe Ala
425	430	435
Val Thr Gly Asn Gly	Leu Ala Asn Gln	Gly Asn Asn Pro Glu Val
440	445	450
Gln Val Asp Thr	Ser Lys Pro Asp Ile	Leu Ile Leu Arg Gln Ile
455	460	465
Met Ala Leu Arg	Val Met Thr Ser Lys	Met Lys Asn Ala Tyr Asn
470	475	480
Gly Asn Asp Val	Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser Gly
485	490	495
Glu Gly Ser Gly	Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser Glu
500	505	510
Phe Asp Tyr Asn	Ala Thr Asp His Ala	Gly Lys Ser Ala Asn Glu
515	520	525
Lys Ala Asp Ser	Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr Leu
530	535	540
Leu Thr Val Phe	Cys Ile Leu Phe Leu	Val Met Gln Arg Glu Trp
545	550	555

Arg

<210> 161  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 161  
 ctccgggta aacccacag ccc 23  
  
 <210> 162  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe

<400> 162  
tcacatcgat gggatccatg accg 24

<210> 163  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 163  
ggtctctgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164  
<211> 870  
<212> DNA  
<213> Homo sapiens

<400> 164  
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gctgagtatc ctgacctgag tcattccccg ggatcaggag cctccagcag 100  
ggaaccttcc attatatctc tcaagcaact tacagctgca cgcagagttg 150  
cgatgaaagt tctaattctc tccctcctcc tgttgctgcc actaatgctg 200  
atgtccatgg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250  
ggaccgaggg caggcttcta ggagatggct ccaggaaggc ggccaagaat 300  
gtgagtgcga agattggttc ctgagagccc cgagaagaaa attcatgaca 350  
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tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450  
ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagctttgct 500  
ctgcctttgt aggagctctg agcgccact cttccaatta aacattctca 550  
gccaaagaaga cagtgcagc acctaccaga caactcttct cttccaccto 600  
actctccac tgtaaccacc cctaaatcat tccagtgtc tcaaaaagca 650  
tggttttcaa gatcattttg ttgttgctc tctctagtgt cttcttctct 700  
cgtcagctct agcctgtgcc ctccccttac ccaggcttag gcttaattac 750  
ctgaaagatt ccaggaaact gtagcttcct agctagtgtc atttaacctt 800  
aaatgcaatc aggaagtag caaacagaag tcaataataa tttttaaatg 850  
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165  
<211> 119  
<212> PRT  
<213> Homo sapiens

<400> 165  
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg	20	25	30
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu	35	40	45
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro	50	55	60
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys	65	70	75
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln	80	85	90
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln	95	100	105
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu	110	115	

<210> 166

<211> 551

<212> DNA

<213> Homo sapiens

<400> 166

aatggctgtc ttagtacttc gctgacagt tgtcctggga ctgcttgtct 50

tattctctgac ctgctatgca gacgacaaac cagacaagcc agacgacaag 100

ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150

cctcctgggc acagagatca ttgagaatgc agtcgagttc atctccgct 200

ccatgtccag gagcacagga ttatggaat ttgatgataa tgaaggaaaa 250

cattcatcaa agtgacatcc tcaggacaca cccatgtggc tccctggacaa 300

tccaagagca gccaaatcct gcttttccag ttgggtccca caagtcctcc 350

aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400

tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450

ttttagaaag ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500

agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550

a 551

<210> 167

<211> 87

<212> PRT

<213> Homo sapiens

<400> 167

Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu	1	5	10	15
Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro				

	20		25		30
Asp Asp Lys Pro	Asp Asp Ser Gly Lys	Asp Pro Lys Pro Asp Phe			
	35	40			45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala					
	50	55			60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met					
	65	70			75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys					
	80	85			

<210> 168

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 168

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gcagctgctg gtgctgcttc ttaccttgcc cctgcacctc atggctctgc 150

tgggctgctg gcagccccctg tgcaaaagct acttccccta cctgatggcc 200

gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250

cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300

tggagctggg ctgcggaacc ggagccaact ttcagttcta cccaccgggc 350

tgcagggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400

aaagagcatg gctgagaaca ggcaacctca atatgagcgg tttgtggtg 450

ctcctggaga ggacatgaga cagctggctg atggctcoat ggatgtggtg 500

gtctgcactc tgggtgctgt ctctgtgcag agcccaagga aggtcctgca 550

ggaggtccgg agagtactga gaccgggagg tgtgctcttt ttctgggagc 600

atgtggcaga accatatgga agctgggcct tcattgtggc gcaagtttct 650

gagcccacct ggaacacat tggggatggc tgctgcctca ccagagagac 700

ctggaaggat cttgagaacg ccagttcttc cgaaatccaa atggaacgac 750

agccccctcc cttgaagtgg ctacctgttg ggccccacat catgggaaaag 800

gctgtcaaac aatctttccc aagctccaag gcactcattt gctccttccc 850

cagcctccaa ttagaacaag ccacccaoca gctatctat ctccaactga 900

gagggaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950

ctctctcccc aacctctgcc agggcaatct ctaacttcaa tccgccttc 1000

gacagtgaag aagctctact tctacgtgta ccagggagg aaacactagg 1050

acctgttgt atctcaact gcaagtttct ggactagtct cccaacgttt 1100

gcctcccaat gttgtccctt tocttcgttc ccatggtaaa gctcctctcg 1150  
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 ccacctcttt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300  
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<210> 169

<211> 277

<212> PRT

<213> Homo sapiens

<400> 169

Met	Asp	Ile	Leu	Val	Pro	Leu	Leu	Gln	Leu	Leu	Val	Leu	Leu	Leu	1	5	10	15
Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Leu	Gly	Cys	Trp	Gln	Pro	20	25	30	
Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro	35	40	45	
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser	50	55	60	
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu	65	70	75	
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro	80	85	90	
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys	95	100	105	
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu	110	115	120	
Arg	Phe	Val	Val	Ala	Pro	Gly	Glu	Asp	Met	Arg	Gln	Leu	Ala	Asp	125	130	135	
Gly	Ser	Met	Asp	Val	Val	Val	Cys	Thr	Leu	Val	Leu	Cys	Ser	Val	140	145	150	
Gln	Ser	Pro	Arg	Lys	Val	Leu	Gln	Glu	Val	Arg	Arg	Val	Leu	Arg	155	160	165	
Pro	Gly	Gly	Val	Leu	Phe	Phe	Trp	Glu	His	Val	Ala	Glu	Pro	Tyr	170	175	180	
Gly	Ser	Trp	Ala	Phe	Met	Trp	Gln	Gln	Val	Phe	Glu	Pro	Thr	Trp	185	190	195	
Lys	His	Ile	Gly	Asp	Gly	Cys	Cys	Leu	Thr	Arg	Glu	Thr	Trp	Lys	200	205	210	
Asp	Leu	Glu	Asn	Ala	Gln	Phe	Ser	Glu	Ile	Gln	Met	Glu	Arg	Gln	215	220	225	

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly  
 230 235 240  
 Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys  
 245 250 255  
 Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile  
 260 265 270  
 Tyr Leu Pro Leu Arg Gly Thr  
 275

<210> 170

<211> 1621

<212> DNA

<213> Homo sapiens

<400> 170

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 agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150  
 agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgtct 200  
 ctcttcttac tggttttgca ccataacttc ctcagcttga gcagtttgtt 250  
 aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300  
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 cctgtggtca tcgctgcac tgaagacagg ctgggggggg ccattgcagc 400  
 tataaacagc attcagcaaa acaactogctc caatgtgatt ttctacattg 450  
 ttactctcaa caatacagca gaccatctcc ggtcttggtc caacagtgat 500  
 tccctgaaaa gcatcagata caaaattgtc aattttgacc ctaaaactttt 550  
 ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600  
 taacctttgc aaggttttac ttgccaattc tggttccag cgcaaagaag 650  
 gccatatata tggatgatga tgtaattgtg caaggtgata ttcttgccct 700  
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gaagccatgg ggaaggactg cttcatatac tgaagtgttg gaaaaatggt 1200  
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 aggaagtctc ggaagatagc atgcatggga agtaacagtt gctaggcttc 1350  
 aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400  
 atgacaaact gccctgtctg gcagtcagct tcccagacag actatagact 1450  
 ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500  
 aatgactgga aagaagaact gatatggcta gttcagctag ctggtacaga 1550  
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<210> 171  
 <211> 371  
 <212> PRT  
 <213> Homo sapiens

<400> 171  
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 20 25 30  
 Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro  
 35 40 45  
 Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp  
 50 55 60  
 Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp  
 65 70 75  
 Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn  
 80 85 90  
 Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr  
 95 100 105  
 Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser  
 110 115 120  
 Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly  
 125 130 135  
 Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu  
 140 145 150  
 Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys  
 155 160 165  
 Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile  
 170 175 180  
 Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala



185	190	195
Phe Ser Glu Asp Cys Asp Ser Ala Ser	Thr Lys Val Val Ile Arg	
200	205	210
Gly Ala Gly Asn Gln Tyr Asn Tyr Ile	Gly Tyr Leu Asp Tyr Lys	
215	220	225
Lys Glu Arg Ile Arg Lys Leu Ser Met	Lys Ala Ser Thr Cys Ser	
230	235	240
Phe Asn Pro Gly Val Phe Val Ala Asn	Leu Thr Glu Trp Lys Arg	
245	250	255
Gln Asn Ile Thr Asn Gln Leu Glu Lys	Trp Met Lys Leu Asn Val	
260	265	270
Glu Glu Gly Leu Tyr Ser Arg Thr Leu	Ala Gly Ser Ile Thr Thr	
275	280	285
Pro Pro Leu Leu Ile Val Phe Tyr Gln	Gln His Ser Thr Ile Asp	
290	295	300
Pro Met Trp Asn Val Arg His Leu Gly	Ser Ser Ala Gly Lys Arg	
305	310	315
Tyr Ser Pro Gln Phe Val Lys Ala Ala	Lys Leu Leu His Trp Asn	
320	325	330
Gly His Leu Lys Pro Trp Gly Arg Thr	Ala Ser Tyr Thr Asp Val	
335	340	345
Trp Glu Lys Trp Tyr Ile Pro Asp Pro	Thr Gly Lys Phe Asn Leu	
350	355	360
Ile Arg Arg Tyr Thr Glu Ile Ser Asn	Ile Lys	
365	370	

<210> 172

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

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aatgtttctcc gacatgcagt agatgggaga caagaggaga ttcctgtggt 150

catcgctgca tntgaagaca ggcttggggg ggccattgca gctataaca 200

gcattcacga caacactcgn tccaatgtga ttttctacat tgttactctc 250

aacaatacag cagaccatnt ccggtcctgg ntcaacagtg attccctgaa 300

aagcatcaga tacaaaattg tcaattttga cccataaactt ttggaaggaa 350

aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttaaccttt 400  
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catggatgat gatgtaattg tgcaagtgta tattcttgcc ctttacaata 500  
cagcactgaa gccaggacat gcagctgcat ttctagaaga ttgtgattca 550  
gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173  
<211> 1866  
<212> DNA  
<213> Homo sapiens

<400> 173  
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aacgcgggcg gccagacaac gggctgggct ccggggcctg cggcgcgggc 150  
gctgagctgg cagggcgggg cggggcgcgg gctgcatccg catctctctc 200  
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tcacatcact ttccgatcac ttcaaagtgg ttaaaaaacta atatttatat 350  
gacagaagaa aaagatgtca ttccgtaaa gtaaacatcat catcttggtc 400  
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tgaggcagtt tgtaagga tgagggttaa gattcaggaa ttgtagggcc 500  
tcaacctata ggactttgtc ccaaatgctc tccgacatgc agtagatggg 550  
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tgattttcta cattgttact ctcaacaata cagcagacca tctccggtcc 700  
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agaattcgta agctttccat gaaagccagc acttgctcat ttaatcctgg 1100  
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aactggaaaa atggatgaaa ctcaatgtag aagagggact gtatagcaga 1200

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 acagcactct accatcgatc ctatgtggaa tgtccgccac cttggttcca 1300  
 gtgctggaaa acgatattca cctcagtttg taaaggctgc caagttaactc 1350  
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 tgtttgggga aaaatggtat attccagacc caacaggcaa attcaacctca 1450  
 atcogaagat ataccgagat ctcaaacata aagtgaacaa gaatttgaac 1500  
 tgtaagcaag cattttctcag gaagtccctg aagatagcat gcgtgggaag 1550  
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 tgtgtcagct aggtaaagat gacaaactgc cctgtctggc agtcagcttc 1650  
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 tttcttacta caatgctgaa tgactggaaa gaagaactga tatggctagt 1750  
 tcagctagct ggtacagata attcaaaact gctgttggtt ttaattttgt 1800  
 aacctgtggc ctgatctgta aataaaactt acatttttca ataggtaaaa 1850  
 aaaaaaaaa aaaaaa 1866

<210> 174  
 <211> 823  
 <212> DNA  
 <213> Homo sapiens

<400> 174  
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 ctcaccattg aggcagctcc actgtctgtg ctggtctgag ggtgctgcct 150  
 gtcatggggg cagccatctc ccaggggggc ctcctgccta tgcctgcaa 200  
 cggctctgtg ggcttcttgc tgctgctgct ctgggtcatc ctctgctggg 250  
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 agccatgaag gcagctacct gctgcagccc tgaaggcccc tggcctagcc 400  
 tggagcccag gacctaaatc cactcacct agagcctgga attagatcc 450  
 cagagttcag ccagcctggg gtccagaact caagagtcg cctgcttgga 500  
 gctggaccga gcggcccgaga gtctagccag cttggtccca ataggagctc 550  
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 gagccagggc catctggact atgctccatc ccaagggcca agggctcagg 650  
 gccgggtcca ctctttccct aggtgagca cctctaggcc ctctaggttg 700  
 gggaagcaaa ctggaacca tggcaataat aggaggggtg ccaggctggg 750

ccccccctt ggtcctccca gtgtttgctg gataataaat ggaactatgg 800

ctctaaaaaa aaaaaaaaaa aaa 823

<210> 175

<211> 87

<212> PRT

<213> Homo sapiens

<400> 175

Met Gly Ala Ala Ile Ser Gln Gly Ala Leu Ile Ala Ile Val Cys  
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Asn Gly Leu Val Gly Phe Leu Leu Leu Leu Leu Trp Val Ile Leu  
20 25 30

Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu  
35 40 45

Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro  
50 55 60

His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser  
65 70 75

Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr  
80 85

<210> 176

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 176

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cccaggctac cagttcctcc aagcaagtoa ttcccttat ttaaccgatg 100

tgtccctcaa acacctgagt gctactccct atttgcattc gttttgataa 150

atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200

gatacaatcc ttggcctgtg tatcctcgca ttgacctgtt ctttgccat 250

gatgtttacc ttcagattca tcaccaccct tctggttacc attttcattt 300

cattggttat ttggggattg ttgtttgtct gcggtgtttt atggtggctg 350

tattatgact ataccaacga cctcagcata gaattggaca gagaaagga 400

aaatatgaag tgcgtgctgg ggtttgcatt cgtatccaca ggcattcacg 450

cagtgcctgt cgtcttgatt ttgtttctca gaaagagaat aaaattgaca 500

gttgagcttt tccaaatcac aaataaagcc atcagcagtg ctcccttctt 550

gctgtttccag ccactgtgga catttgccat cctcattttc ttctgggttc 600

tctgggtggc tgtgctgctg agcctgggaa ctgcaggagc tgccacgggt 650

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gtggtcgtac catttaattg gcctcatctg gactagtga ttcactcttg 750

cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800  
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 ctgctgtttc tgggtgtctt acaaatacct gctccatctc aaccagaatg 1050  
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 ctgcttttga gacttcataa tttttctagg aaaggtgtta gtggtgtgtt 1200  
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 gtgtggggcag tccctctgtt attggtagct tttttgcct acttagtagc 1300  
 ccatagtttt ttatctgtgt ttgaaactgt gctggatgca cttttctgt 1350  
 gttttgtctg tgatctgga acaaatgatg gatcgtcaga aaagccctac 1400  
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 ggaaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600  
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<210> 177

<211> 445

<212> PRT

<213> Homo sapiens

<400> 177

Met	Ser	Gly	Arg	Thr	Ile	Leu	Gly	Leu	Cys	Ile	Leu	Ala	Leu
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Ala	Leu	Ser	Leu	Ala	Met	Met	Phe	Thr	Phe	Arg	Phe	Ile	Thr	Thr
				20					25					30

Leu	Leu	Val	His	Ile	Phe	Ile	Ser	Leu	Leu	Ile	Leu	Gly	Leu	Leu
				35					40					45

Phe	Val	Cys	Gly	Val	Leu	Trp	Trp	Leu	Tyr	Tyr	Asp	Tyr	Thr	Asn
				50					55					60

Asp	Leu	Ser	Ile	Glu	Leu	Asp	Thr	Glu	Arg	Glu	Asn	Met	Lys	Cys
				65				70						75

Val	Leu	Gly	Phe	Ala	Ile	Val	Ser	Thr	Gly	Ile	Thr	Ala	Val	Leu
				80					85					90

Leu	Val	Leu	Ile	Phe	Val	Leu	Arg	Lys	Arg	Ile	Lys	Leu	Thr	Val
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	95	100	105
Glu Leu Phe Gln	Ile Thr Asn Lys Ala	Ile Ser Ser Ala Pro	Phe
	110	115	120
Leu Leu Phe Gln	Pro Leu Trp Thr Phe	Ala Ile Leu Ile Phe	Phe
	125	130	135
Trp Val Leu Trp	Val Ala Val Leu Leu	Ser Leu Gly Thr Ala	Gly
	140	145	150
Ala Ala Gln Val	Met Glu Gly Gly Gln	Val Glu Tyr Lys Pro	Leu
	155	160	165
Ser Gly Ile Arg	Tyr Met Trp Ser Tyr	His Leu Ile Gly Leu	Ile
	170	175	180
Trp Thr Ser Glu	Phe Ile Leu Ala Cys	Gln Gln Met Thr Ile	Ala
	185	190	195
Gly Ala Val Val	Thr Cys Tyr Phe Asn	Arg Ser Lys Asn Asp	Pro
	200	205	210
Pro Asp His Pro	Ile Leu Ser Ser Leu	Ser Ile Leu Phe Phe	Tyr
	215	220	225
His Gln Gly Thr	Val Val Lys Gly Ser	Phe Leu Ile Ser Val	Val
	230	235	240
Arg Ile Pro Arg	Ile Ile Val Met Tyr	Met Gln Asn Ala Leu	Lys
	245	250	255
Glu Gln Gln His	Gly Ala Leu Ser Arg	Tyr Leu Phe Arg Cys	Cys
	260	265	270
Tyr Cys Cys Phe	Trp Cys Leu Asp Lys	Tyr Leu Leu His Leu	Asn
	275	280	285
Gln Asn Ala Tyr	Thr Thr Ala Ile	Asn Gly Thr Asp Phe	Cys
	290	295	300
Thr Ser Ala Lys	Asp Ala Phe Lys Ile	Leu Ser Lys Asn Ser	Ser
	305	310	315
His Phe Thr Ser	Ile Asn Cys Phe Gly	Asp Phe Ile Ile Phe	Leu
	320	325	330
Gly Lys Val Leu	Val Val Cys Phe Thr	Val Phe Gly Gly Leu	Met
	335	340	345
Ala Phe Asn Tyr	Asn Arg Ala Phe Gln	Val Trp Ala Val Pro	Leu
	350	355	360
Leu Leu Val Ala	Phe Phe Ala Tyr Leu	Val Ala His Ser Phe	Leu
	365	370	375
Ser Val Phe Glu	Thr Val Leu Asp Ala	Leu Phe Leu Cys Phe	Ala
	380	385	390
Val Asp Leu Glu	Thr Asn Asp Gly Ser	Ser Glu Lys Pro Tyr	Phe
	395	400	405
Met Asp Gln Glu	Phe Leu Ser Phe Val	Lys Arg Ser Asn Lys	Leu

410

415

420

Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu  
425 430 435

Glu Gly Thr Glu Leu Gln Ala Ile Val Arg  
440 445

&lt;210&gt; 178

&lt;211&gt; 2773

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 178

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aagggaaaaa gaatatctcat tctgtgtggt gaaaaatttt tgaaaaaaaa 150  
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actggagtac attcaacaa agaaacggca aagaagatta aaaggcccaa 300  
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<210> 179



<211> 678  
 <212> PRT  
 <213> Homo sapiens

<400> 179

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Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn	35	40	45	
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val	50	55	60	
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly	65	70	75	
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val	80	85	90	
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg	95	100	105	
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly	110	115	120	
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val	125	130	135	
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu	140	145	150	
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr	155	160	165	
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln	170	175	180	
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala	185	190	195	
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr	200	205	210	
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu	215	220	225	
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg	230	235	240	
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala	245	250	255	
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val	260	265	270	
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	275	280	285	
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly				

290										295					300				
Ser	Thr	Ser	Ile	Gly	Lys	Arg	Arg	Phe	Arg	Arg	Ile	Gln	Lys	Gln	Leu				
				305						310					315				
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				320						325				330					
Leu	Met	Gly	Val	Val	Gln	Tyr	Gly	Asp	Asn	Pro	Ala	Thr	His	Phe					
				335					340					345					
Asn	Leu	Lys	Thr	His	Thr	Asn	Ser	Arg	Asp	Leu	Lys	Thr	Ala	Ile					
				350					355					360					
Glu	Lys	Ile	Thr	Gln	Arg	Gly	Gly	Leu	Ser	Asn	Val	Gly	Arg	Ala					
				365					370					375					
Ile	Ser	Phe	Val	Thr	Lys	Asn	Phe	Phe	Ser	Lys	Ala	Asn	Gly	Asn					
				380					385					390					
Arg	Ser	Gly	Ala	Pro	Asn	Val	Val	Val	Val	Met	Val	Asp	Gly	Trp					
				395					400					405					
Pro	Thr	Asp	Lys	Val	Glu	Glu	Ala	Ser	Arg	Leu	Ala	Arg	Glu	Ser					
				410					415					420					
Gly	Ile	Asn	Ile	Phe	Phe	Ile	Thr	Ile	Glu	Gly	Ala	Ala	Glu	Asn					
				425					430					435					
Glu	Lys	Gln	Tyr	Val	Val	Glu	Pro	Asn	Phe	Ala	Asn	Lys	Ala	Val					
				440					445					450					
Cys	Arg	Thr	Asn	Gly	Phe	Tyr	Ser	Leu	His	Val	Gln	Ser	Trp	Phe					
				455					460					465					
Gly	Leu	His	Lys	Thr	Leu	Gln	Pro	Leu	Val	Lys	Arg	Val	Cys	Asp					
				470					475					480					
Thr	Asp	Arg	Leu	Ala	Cys	Ser	Lys	Thr	Cys	Leu	Asn	Ser	Ala	Asp					
				485					490					495					
Ile	Gly	Phe	Val	Ile	Asp	Gly	Ser	Ser	Ser	Val	Gly	Thr	Gly	Asn					
				500					505					510					
Phe	Arg	Thr	Val	Leu	Gln	Phe	Val	Thr	Asn	Leu	Thr	Lys	Glu	Phe					
				515					520					525					
Glu	Ile	Ser	Asp	Thr	Asp	Thr	Arg	Ile	Gly	Ala	Val	Gln	Tyr	Thr					
				530					535					540					
Tyr	Glu	Gln	Arg	Leu	Glu	Phe	Gly	Phe	Asp	Lys	Tyr	Ser	Ser	Lys					
				545					550					555					
Pro	Asp	Ile	Leu	Asn	Ala	Ile	Lys	Arg	Val	Gly	Tyr	Trp	Ser	Gly					
				560					565					570					
Gly	Thr	Ser	Thr	Gly	Ala	Ala	Ile	Asn	Phe	Ala	Leu	Glu	Gln	Leu					
				575					580					585					
Phe	Lys	Lys	Ser	Lys	Pro	Asn	Lys	Arg	Lys	Leu	Met	Ile	Leu	Ile					
				590					595					600					
Thr	Asp	Gly	Arg	Ser	Tyr	Asp	Asp	Val	Arg	Ile	Pro	Ala	Met	Ala					

605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln	
665	670	675

Pro Arg Asn

<210> 180  
 <211> 1759  
 <212> DNA  
 <213> Homo sapiens

<400> 180  
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 gcgctgtgc ctcagcacca tgggtgcgcc ggtcccgcag gctccgcgcc 150  
 agatcccgcc cactacagtt tttctctgac tctaattgat gcactggaca 200  
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 cccactggc atgcatatg gaacagtga cttacttcat ggcgtgaacc 500  
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 cagatgtaca aggggactgt gtccatgcca gtcttcagct ccttgagggc 900  
 ctactggcct ggtcttcaga gcctcattgg agacattgac aatgccatga 950  
 ggaccttctc caactactac actgtatgga agcagtttgg ggggctcccg 1000

gaattctaca acattcctca gggatacaca gtggagaagc gagagggcta 1050  
cccacttcgg ccagaactta ttgaaagcgc aatgtacctc tacctgtcca 1100  
cggggggatcc caccctccta gaactcggaa gagatgctgt ggaatccatt 1150  
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agaccacaag ctggacaacc gcatggagtc gttcttctctg gccgagactg 1250  
tgaaatacct ctacctcctg tttagcccaa ccaacttcat ccacaacaat 1300  
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tcttctcacc agaaaacat gaccaggcaa gggagaggaa gcctgccaaa 1600  
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<210> 181

<211> 541

<212> PRT

<213> Homo sapiens

<400> 181

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Leu	Pro	Gln	His	His	Gly	Ala	Pro	Gly	Pro	Asp	Gly	Ser	Ala	Pro
				20					25					30
Asp	Pro	Ala	His	Tyr	Ser	Phe	Ser	Leu	Thr	Leu	Ile	Asp	Ala	Leu
				35					40					45
Asp	Thr	Leu	Leu	Ile	Leu	Gly	Asn	Val	Ser	Glu	Phe	Gln	Arg	Val
				50					55					60
Val	Glu	Val	Leu	Gln	Asp	Ser	Val	Asp	Phe	Asp	Ile	Asp	Val	Asn
				65					70					75
Ala	Ser	Val	Phe	Glu	Thr	Asn	Ile	Arg	Val	Val	Gly	Gly	Leu	Leu
				80					85					90
Ser	Ala	His	Leu	Leu	Ser	Lys	Lys	Ala	Gly	Val	Glu	Val	Glu	Ala
				95					100					105
Gly	Trp	Pro	Cys	Ser	Gly	Pro	Leu	Leu	Arg	Met	Ala	Glu	Glu	Ala
				110					115					120
Ala	Arg	Lys	Leu	Leu	Pro	Ala	Phe	Gln	Thr	Pro	Thr	Gly	Met	Pro

	125		130		135
Tyr Gly Thr Val	Asn Leu Leu His Gly	Val Asn Pro Gly Glu Thr			
	140	145			
Pro Val Thr Cys	Thr Ala Gly Ile Gly Thr Phe Ile Val Glu Phe				
	155	160			165
Ala Thr Leu Ser	Ser Leu Thr Gly Asp	Pro Val Phe Glu Asp Val			
	170	175			180
Ala Arg Val Ala	Leu Met Arg Leu Trp Glu Ser Arg Ser Asp Ile				
	185	190			195
Gly Leu Val Gly	Asn His Ile Asp Val Leu Thr Gly Lys Trp Val				
	200	205			210
Ala Gln Asp Ala	Gly Ile Gly Ala Gly Val Asp Ser Tyr Phe Glu				
	215	220			225
Tyr Leu Val Lys	Gly Ala Ile Leu Leu Gln Asp Lys Lys Leu Met				
	230	235			240
Ala Met Phe Leu	Glu Tyr Asn Lys Ala Ile Arg Asn Tyr Thr Arg				
	245	250			255
Phe Asp Asp Trp	Tyr Leu Trp Val Gln Met Tyr Lys Gly Thr Val				
	260	265			270
Ser Met Pro Val	Phe Gln Ser Leu Glu Ala Tyr Trp Pro Gly Leu				
	275	280			285
Gln Ser Leu Ile	Gly Asp Ile Asp Asn Ala Met Arg Thr Phe Leu				
	290	295			300
Asn Tyr Tyr Thr	Val Trp Lys Gln Phe Gly Gly Leu Pro Glu Phe				
	305	310			315
Tyr Asn Ile Pro	Gln Gly Tyr Thr Val Glu Lys Arg Glu Gly Tyr				
	320	325			330
Pro Leu Arg Pro	Glu Leu Ile Glu Ser Ala Met Tyr Leu Tyr Arg				
	335	340			345
Ala Thr Gly Asp	Pro Thr Leu Leu Glu Leu Gly Arg Asp Ala Val				
	350	355			360
Glu Ser Ile Glu	Lys Ile Ser Lys Val Glu Cys Gly Phe Ala Thr				
	365	370			375
Ile Lys Asp Leu	Arg Asp His Lys Leu Asp Asn Arg Met Glu Ser				
	380	385			390
Phe Phe Leu Ala	Glu Thr Val Lys Tyr Leu Tyr Leu Leu Phe Asp				
	395	400			405
Pro Thr Asn Phe	Ile His Asn Asn Gly Ser Thr Phe Asp Ala Val				
	410	415			420
Ile Thr Pro Tyr	Gly Glu Cys Ile Leu Gly Ala Gly Gly Tyr Ile				
	425	430			435
Phe Asn Thr Glu	Ala His Pro Ile Asp Leu Ala Ala Leu His Cys				

440	445	450
Cys Gln Arg Leu Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu Met	
455	460	465
Arg Glu Phe Tyr Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln Lys	
470	475	480
Asn Thr Val Ser Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro Gly	
485	490	495
Thr Leu Phe Ser Pro Glu Asn His Asp	Gln Ala Arg Glu Arg Lys	
500	505	510
Pro Ala Lys Gln Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln Pro	
515	520	525
Phe Thr Ser Lys Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp Ser	
530	535	540

Ser

<210> 182  
 <211> 2056  
 <212> DNA  
 <213> Homo sapiens

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 gcttcctggg ccggctctag aacaattcag gcttcgctgc gactcagacc 150  
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200  
 gctttatttt ggaaagaaac aatgttctag gtcaaaactga gtctacaaaa 250  
 tgcagacttt cacaatgggt ctagaagaaa tctggacaag tcttttcatg 300  
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 atgacatcac ggccactgtg ccatacaacc ttcgtgtcag ggccacattg 600  
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 ctcaaccatc cttaccgcac ctgggatgga gatcaccaaa gatgcttcc 700  
 acctggttat tgagctggag gacctggggc ccagtttga gttccttgtg 750  
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 aatcagctgc agaagggagg aggtggatgc ctgtgccacg gctgtgatgt 1150  
 ctctcaggaga actcctcagg gctcggatct cataggtttg cggaaagggc 1200  
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 aagtgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300  
 gagcctgttg tctacaagtc tagaagcaac catcagaggc agggtgggtt 1350  
 gtctaacaga aactgactg aggcctaggg gatgtgacct ctgactggg 1400  
 ggctgccact tgctgggtga gcaaccctgg gaaaagtgc ttcacctt 1450  
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 agacagcagg tgaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950  
 gtaacatgtg catgtttgtt gtgtccttt tttctgttg taaagtacag 2000  
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 aaaaaa 2056

<210> 183  
 <211> 311  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> Signal peptide  
 <222> 1-29  
 <223> Signal peptide

<220>  
 <221> N-glycosylation sites  
 <222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu	
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Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp	
				20					25					30	
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	
				35					40					45	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	
				50					55					60	
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	
				65					70					75	
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	
				80					85					90	
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	
				95					100					105	
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	
				110					115					120	
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	
				125					130					135	
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	
				140					145					150	
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	
				155					160					165	
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
				170					175					180	
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
				185					190					195	
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
				200					205					210	
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
				215					220					225	



Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu Phe Ala Phe  
230 235 240

Val Gly Phe Met Leu Ile Leu Val Val Val Pro Leu Phe Val Trp  
245 250 255

Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val Val  
260 265 270

Leu Pro Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Lys Leu Ile  
275 280 285

Ser Cys Arg Arg Glu Glu Val Asp Ala Cys Ala Thr Ala Val Met  
290 295 300

Ser Pro Glu Glu Leu Leu Arg Ala Trp Ile Ser  
305 310

<210> 184  
<211> 808  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 654, 711, 748  
<223> unknown base

<400> 184  
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agaatgcttt attttggaaa gaaacaatgt tctaggtcaa actgagtcta 200  
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cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggcca 550  
cattgggctc acagacctca gcctggagca tcctgaagca tccctttaat 600  
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ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750  
gaaccacctg cggccgctgg ggtatctctc gagaaaagag aggcccaata 800  
tgaccac 808

<210> 185  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 185  
aggcttcgct gcgactagac ctc 23

<210> 186  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 186  
ccaggctggg taaggatggt tgag 24

<210> 187  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

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<210> 188  
<211> 1227  
<212> DNA  
<213> Homo sapiens

<400> 188  
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aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtgcg 150  
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200  
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250  
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ggccaacagg agcctgacag caacaaggag attgagagct ttgcccgccg 350  
caoctacagt gtctcattcc ccatgtttag caagattgca gtcaccggta 400  
ctgggtgccca tcttgccttc aagtacctgg cccagacttc tgggaaggag 450  
cccacctgga acttctggaa gtacctagta gcccagatg gaaaggtggt 500  
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga cccagatca 550  
cagcgctcgtg gaggaagctc atoctactga agcgagaaga cttataacca 600

ccgcgtctcc tcctccacca cctcatcccg cccacctgtg tggggctgac 650  
 caatgcaaac tcaaatgggtg cttcaagggtg agagacccac tgactctcct 700  
 tcctttactc ttatgccatt ggtcccatca ttcttgtggg ggaaaaattc 750  
 tagtattttg attatttgaa tcttacagca acaaatagga actcctggcc 800  
 aatgagagct ctgaccagt gaatcaccag cggatacgaa cgtcttgcca 850  
 acaaaaatgt gtggcaaata gaagtatatc aagcaataat ctccaccaca 900  
 aggccttctgt aaactgggac caatgattac ctcatagggc tgttgtgagg 950  
 attaggatga aatacctgtg aaagtgccta ggcagtgcca gccaaatagg 1000  
 aggcattcaa tgaacatttt ttgcatataa accaaaaaat aacttgttat 1050  
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 caaaggttta gttgttgta ttctctctgt attattttct tcattacaaa 1150  
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<210> 189

<211> 187

<212> PRT

<213> Homo sapiens

<400> 189

Met	Val	Ala	Ala	Thr	Val	Ala	Ala	Ala	Trp	Leu	Leu	Leu	Trp	Ala	1	5	10	15
Ala	Ala	Cys	Ala	Gln	Gln	Glu	Gln	Asp	Phe	Tyr	Asp	Phe	Lys	Ala	20	25	30	35
Val	Asn	Ile	Arg	Gly	Lys	Leu	Val	Ser	Leu	Glu	Lys	Tyr	Arg	Gly	40	45	50	55
Ser	Val	Ser	Leu	Val	Val	Asn	Val	Ala	Ser	Glu	Cys	Gly	Phe	Thr	60	65	70	75
Asp	Gln	His	Tyr	Arg	Ala	Leu	Gln	Gln	Ser	Gln	Arg	Asp	Leu	Gly	80	85	90	95
Pro	His	His	Phe	Asn	Val	Leu	Ala	Phe	Pro	Cys	Asn	Gln	Phe	Gly	100	105	110	115
Gln	Gln	Glu	Pro	Asp	Ser	Asn	Lys	Glu	Ile	Glu	Ser	Phe	Ala	Arg	120	125	130	135
Arg	Thr	Tyr	Ser	Val	Ser	Phe	Pro	Met	Phe	Ser	Lys	Ile	Ala	Val	140	145	150	155
Thr	Gly	Thr	Gly	Ala	His	Pro	Ala	Phe	Lys	Tyr	Leu	Ala	Gln	Thr	160	165	170	175
Ser	Gly	Lys	Glu	Pro	Thr	Trp	Asn	Phe	Trp	Lys	Tyr	Leu	Val	Ala	180	185	190	195
Pro	Asp	Gly	Lys	Val	Val	Gly	Ala	Trp	Asp	Pro	Thr	Val	Ser	Val	200	205	210	215

155 160 165  
 Glu Glu Val Arg Pro Gln Ile Thr Ala Leu Val Arg Lys Leu Ile  
 170 175 180  
 Leu Leu Lys Arg Glu Asp Leu  
 185

<210> 190  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 190  
 gcaggacttc tacgacttca aggc 24

<210> 191  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 191  
 agtctgggcc aggtacttga aggc 24

<210> 192  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 192  
 caacatccgg ggcaaaactgg tgtcgctgga gaagtaccgc ggatcggtgt 50

<210> 193  
 <211> 2187  
 <212> DNA  
 <213> Homo sapiens

<400> 193  
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 acgtgggat gctgcgcctg gggagggtgt gcgccgggag ctggggggtg 100  
 ctggggggccc gggccgccct ctctcgaggt tggcaggaag ccaggttgca 150  
 ggggtgtccc ttctcagtt ccagagaggt ggatcgcatg gtctccacgc 200  
 ccatcgaggg cctcagctac gttcagggtt gcacacacac gcattctaac 250  
 agcaagactg tgggccagtg cctggagacc acagcacaga gggctccaga 300  
 acgagaggcc ttggtcgtcc tccatgaaga cgtcagggtg acctttgccc 350  
 aactcaaggg ggaggtggac aaagctgctt ctggcctcct gagcattggc 400

ctctgcaaaag gtgaccggct gggcatgtgg ggacctaact cctatgcatg 450  
 ggtgtctcatg cagttggcca ccgcccaggc gggcatcatt ctggtgtctg 500  
 tgaacccagc ctaccaggct atggaactgg agtatgtcct caagaagggtg 550  
 ggctgcaagg cccttgtgtt cccaagcaa ttcaagacc agcaatacta 600  
 caacgtcctg aagcagatct gtccagaagt ggagaatgcc cagccagggg 650  
 ccttgaagag tcagaggctc ccagatctga ccacagtcatt ctcggtggat 700  
 gcccctttgc cggggaccct gctcctggat gaagtgggtg cggctggcag 750  
 cacacggcag catctggacc agctccaata caaccagcag ttcctgtcct 800  
 gccatgacc catcaacatc cagttcacct cggggacaac aggcagcccc 850  
 aagggggcca ccctctccca ctacaacatt gtcaacaact ccaacatttt 900  
 aggagagcgc ctgaaactgc atgagaagac accagagcag ttgaggatga 950  
 tcttgcccaa cccctgtac cattgcctgg gttccgtggc aggcacaaatg 1000  
 atgtgtctga tgtacgggtc caccctcatc ctggcctctc ccatcttcaa 1050  
 tggcaagaag gcaactggagg ccatcagcag agagagaggc accttctctg 1100  
 atggtaaccc cacgatgttc gtggacattc tgaaccagcc agacttctcc 1150  
 agttatgaca tctcgacct gtgtggaggt gtcattgctg ggtcccctgc 1200  
 acctccagag ttgatccgag ccatcatcaa caagataaat atgaaggacc 1250  
 tgggtggttc ttatggaacc acagagaaca gtcccgtagc attcgcgcac 1300  
 ttccctgagg aactgtgga gcagaaggca gaaagcgtgg gcagaattat 1350  
 gcctcacacg gaggcccgga tcatgaacat ggaggcaggg acgttgccaa 1400  
 agctgaacac gccgggggag ctgtgcatcc gaggtactg cgtcatgctg 1450  
 ggctactggg gtgagcctca gaagacagag gaagcagtgg atcaggacaa 1500  
 gtggtattgg acaggagatg tcgcccaaat gaatgagcag ggcttctgca 1550  
 agatcgtggg ccgctctaag gatatgatca tccgggggtg tgagaacatc 1600  
 taccgccgag agctcgagga cttctttcac acacaccgca aggtgcagga 1650  
 agtgacagggt gtgggagtga aggacgatcg gatgggggaa gagatttgtg 1700  
 cctgcattcg gctgaaggac ggggaggaga ccacgggtga ggagataaaa 1750  
 gctttctgca aagggaagat ctctcacttc aagattccga agtacatcgt 1800  
 gtttgtcaca aactaccccc tcaccatttc aggaaagatc cagaaaattca 1850  
 aacttcgaga gcagatggaa cgacatctaa atctgtgaat aaagcagcag 1900  
 gcctgtcctg gccggttggc ttgactctct cctgtcagaa tgcaacctgg 1950  
 ctttatgcac ctatagttcc ccagacccca gttctgagcc aggcacatca 2000

aattgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050  
aactgcgctg ggcacaagggt gccaaaaaggc aggcagcctg cccaggccct 2100  
ccctcctgtc catccccccac attccctgtg ctgtccttgt gatttggeat 2150  
aaagagcttc tgttttcttt gaaaaaaaaa aaaaaaa 2187

<210> 194

<211> 615

<212> PRT

<213> Homo sapiens

<400> 194

Met	Ala	Val	Tyr	Val	Gly	Met	Leu	Arg	Leu	Gly	Arg	Leu	Cys	Ala	1	5	10	15
Gly	Ser	Ser	Gly	Val	Leu	Gly	Ala	Arg	Ala	Ala	Leu	Ser	Arg	Ser	20	25	30	
Trp	Gln	Glu	Ala	Arg	Leu	Gln	Gly	Val	Arg	Phe	Leu	Ser	Ser	Arg	35	40	45	
Glu	Val	Asp	Arg	Met	Val	Ser	Thr	Pro	Ile	Gly	Gly	Leu	Ser	Tyr	50	55	60	
Val	Gln	Gly	Cys	Thr	Lys	Lys	His	Leu	Asn	Ser	Lys	Thr	Val	Gly	65	70	75	
Gln	Cys	Leu	Glu	Thr	Thr	Ala	Gln	Arg	Val	Pro	Glu	Arg	Glu	Ala	80	85	90	
Leu	Val	Val	Leu	His	Glu	Asp	Val	Arg	Leu	Thr	Phe	Ala	Gln	Leu	95	100	105	
Lys	Glu	Glu	Val	Asp	Lys	Ala	Ala	Ser	Gly	Leu	Leu	Ser	Ile	Gly	110	115	120	
Leu	Cys	Lys	Gly	Asp	Arg	Leu	Gly	Met	Trp	Gly	Pro	Asn	Ser	Tyr	125	130	135	
Ala	Trp	Val	Leu	Met	Gln	Leu	Ala	Thr	Ala	Gln	Ala	Gly	Ile	Ile	140	145	150	
Leu	Val	Ser	Val	Asn	Pro	Ala	Tyr	Gln	Ala	Met	Glu	Leu	Glu	Tyr	155	160	165	
Val	Leu	Lys	Lys	Val	Gly	Cys	Lys	Ala	Leu	Val	Phe	Pro	Lys	Gln	170	175	180	
Phe	Lys	Thr	Gln	Gln	Tyr	Tyr	Asn	Val	Leu	Lys	Gln	Ile	Cys	Pro	185	190	195	
Glu	Val	Glu	Asn	Ala	Gln	Pro	Gly	Ala	Leu	Lys	Ser	Gln	Arg	Leu	200	205	210	
Pro	Asp	Leu	Thr	Thr	Val	Ile	Ser	Val	Asp	Ala	Pro	Leu	Pro	Gly	215	220	225	
Thr	Leu	Leu	Leu	Asp	Glu	Val	Val	Ala	Ala	Gly	Ser	Thr	Arg	Gln	230	235	240	
His	Leu	Asp	Gln	Leu	Gln	Tyr	Asn	Gln	Gln	Phe	Leu	Ser	Cys	His				

245	250	255
Asp Pro Ile Asn Ile Gln Phe Thr Ser	Gly Thr Thr Gly Ser Pro	
260	265	270
Lys Gly Ala Thr Leu Ser His Tyr Asn	Ile Val Asn Asn Ser Asn	
275	280	285
Ile Leu Gly Glu Arg Leu Lys Leu His	Glu Lys Thr Pro Glu Gln	
290	295	300
Leu Arg Met Ile Leu Pro Asn Pro Leu	Tyr His Cys Leu Gly Ser	
305	310	315
Val Ala Gly Thr Met Met Cys Leu Met	Tyr Gly Ala Thr Leu Ile	
320	325	330
Leu Ala Ser Pro Ile Phe Asn Gly Lys	Lys Ala Leu Glu Ala Ile	
335	340	345
Ser Arg Glu Arg Gly Thr Phe Leu Tyr	Gly Thr Pro Thr Met Phe	
350	355	360
Val Asp Ile Leu Asn Gln Pro Asp Phe	Ser Ser Tyr Asp Ile Ser	
365	370	375
Thr Met Cys Gly Gly Val Ile Ala Gly	Ser Pro Ala Pro Pro Glu	
380	385	390
Leu Ile Arg Ala Ile Ile Asn Lys Ile	Asn Met Lys Asp Leu Val	
395	400	405
Val Ala Tyr Gly Thr Thr Glu Asn Ser	Pro Val Thr Phe Ala His	
410	415	420
Phe Pro Glu Asp Thr Val Glu Gln Lys	Ala Glu Ser Val Gly Arg	
425	430	435
Ile Met Pro His Thr Glu Ala Arg Ile	Met Asn Met Glu Ala Gly	
440	445	450
Thr Leu Ala Lys Leu Asn Thr Pro Gly	Glu Leu Cys Ile Arg Gly	
455	460	465
Tyr Cys Val Met Leu Gly Tyr Trp Gly	Glu Pro Gln Lys Thr Glu	
470	475	480
Glu Ala Val Asp Gln Asp Lys Trp Tyr	Trp Thr Gly Asp Val Ala	
485	490	495
Thr Met Asn Glu Gln Gly Phe Cys Lys	Ile Val Gly Arg Ser Lys	
500	505	510
Asp Met Ile Ile Arg Gly Gly Glu Asn	Ile Tyr Pro Ala Glu Leu	
515	520	525
Glu Asp Phe Phe His Thr His Pro Lys	Val Gln Glu Val Gln Val	
530	535	540
Val Gly Val Lys Asp Asp Arg Met Gly	Glu Glu Ile Cys Ala Cys	
545	550	555
Ile Arg Leu Lys Asp Gly Glu Glu Thr	Thr Val Glu Glu Ile Lys	

	560		565		570
Ala Phe Cys Lys	Gly Lys Ile Ser His	Phe Lys Ile Pro Lys Tyr			
	575	580			585
Ile Val Phe Val Thr Asn Tyr Pro Leu	Thr Ile Ser Gly Lys Ile				
	590	595			600
Gln Lys Phe Lys Leu Arg Glu Gln Met	Glu Arg His Leu Asn Leu				
	605	610			615

<210> 195  
 <211> 642  
 <212> DNA  
 <213> Homo sapiens

<400> 195  
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 agcaggttgcg gatgatcctg cccaaccccc tgtaccattg cctgggttcc 100  
 gtggcaggca caatgatgtg tctgatgtac ggtgccacc ccatcctggc 150  
 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200  
 gaggcacctt cctgtatggt acccccacga tgttcgtgga cattctgaac 250  
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300  
 tgctgggtcc cctgcacctc cagagttgat ccgagccatc atcaacaaga 350  
 taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtccc 400  
 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaag 450  
 cgtgggcaga attatgcctc aacaggaggc gcggtatcatg aacatggagg 500  
 cagggacgct ggcaaagctg aacacgcccg gggagctgtg catccgaggg 550  
 tactgcgtca tgctgggcta ctggggtgag cctcagaaga cagaggaagc 600  
 agtgatcag gacaagtggg attggacag agatgtcgcc ac 642

<210> 196  
 <211> 1575  
 <212> DNA  
 <213> Homo sapiens

<400> 196  
 gagcaggacg gagccatgga ccccgccagg aaagcaggtg ccagggccat 50  
 gatctggact gcaggctggc tgctgctgct gctgcttcgc ggaggagcgc 100  
 aggccctgga gtgctacaga tgcgtgcaga aagcagatga cggatgctcc 150  
 ccgaacaaga tgaagacagt gaagtgcgag cggggcgtgg acgtctgcac 200  
 cgaggccgtg ggggcggtgg agaccatcca cggacaattc tcgtggcgag 250  
 tgcggggttg cggttcggga ctcccggca agaatagccg cggcctggat 300  
 ctccacgggc ttctggcggt catccagctg cagcaatgag ctcaggatcg 350



ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac ccggcaggta 400  
 atgagagatgc ataccgccccc aacggcggtgg agtgctacag ctgtgtgggc 450  
 ctgagccggg aggcgtgccca gggtagatcg ccgccggctg tgagctgcta 500  
 caacgccagc gatcatgtct acaagggtcg ctcgacggc aacgtcacct 550  
 tgacggcagc taatgtgaat gtgtccttgc ctgtccgggg ctgtgtccag 600  
 gatgaattct gcaactcggga tggagtaaca ggcccagggt tcacgcctag 650  
 tggctctctg tgcagggggt ccgctgtaa ctctgacctc cgcaacaaga 700  
 cctacttctc ccctcgaatc ccaccccttg tccggctgcc ccctccagag 750  
 cccacgactg tggcctcaac cacatctgtc accacttcta cctcggcccc 800  
 agtgagagcc acatccacca ccaaacccat gccagcgcca accagtcaga 850  
 ctccgagaca gggagtagaa cacgaggcct ccggggatga ggagcccagg 900  
 ttgactggag gcgcgcgtgg ccaccaggac gcgagcaatt cagggcagta 950  
 tcctgcaaaa gggggggcccc agcagcccca taataaaggc tgtgtggctc 1000  
 ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgccta 1050  
 ctgtgagctt ctccacctgg aaatttccct ctccactact tctctggccc 1100  
 tgggtacccc tcttctcctc acttctgtt cccaccactg gactgggctg 1150  
 gccacgcccc tgtttttcca acattcccca gtatccccag cttctgtgctc 1200  
 gctggtttgc ggctttggga aataaaatac cggtgtatat attctgccag 1250  
 ggggtgtcta gctttttgag gacagctcct gtatccttct catcctgtgc 1300  
 tctccgcttg tcctcttggt atgttaggac agagtgcagc aagtcagctg 1350  
 tcacggggaa ggtgagagag aggatgctaa gcttctact cactttctcc 1400  
 tagccagcct ggactttgga gcgtgggggt ggtgggacaa tggctcccca 1450  
 ctctaagcac tgctccccc actccccgca tctttgggga atcggttccc 1500  
 catatgtctt cttactaga ctgtgagctc ctgaggggg ggcccgtac 1550  
 ccaattcgcc ctatagtgc tcgta 1575

<210> 197  
 <211> 346  
 <212> PRT  
 <213> Homo sapiens

<400> 197  
 Met Asp Pro Ala Arg Lys Ala Gly Ala Gln Ala Met Ile Trp Thr  
 1 5 10 15  
 Ala Gly Trp Leu Leu Leu Leu Leu Arg Gly Gly Ala Gln Ala  
 20 25 30  
 Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

	35	40	45
Pro Asn Lys Met	Lys Thr Val Lys Cys	Ala Pro Gly Val Asp	Val
	50	55	60
Cys Thr Glu Ala	Val Gly Ala Val Glu	Thr Ile His Gly Gln	Phe
	65	70	75
Ser Leu Ala Val	Arg Gly Cys Gly Ser	Gly Leu Pro Gly Lys	Asn
	80	85	90
Asp Arg Gly Leu	Asp Leu His Gly Leu	Leu Ala Phe Ile Gln	Leu
	95	100	105
Gln Gln Cys Ala	Gln Asp Arg Cys Asn	Ala Lys Leu Asn Leu	Thr
	110	115	120
Ser Arg Ala Leu	Asp Pro Ala Gly Asn	Glu Ser Ala Tyr Pro	Pro
	125	130	135
Asn Gly Val Glu	Cys Tyr Ser Cys Val	Gly Leu Ser Arg Glu	Ala
	140	145	150
Cys Gln Gly Thr	Ser Pro Pro Val Val	Ser Cys Tyr Asn Ala	Ser
	155	160	165
Asp His Val Tyr	Lys Gly Cys Phe Asp	Gly Asn Val Thr Leu	Thr
	170	175	180
Ala Ala Asn Val	Thr Val Ser Leu Pro	Val Arg Gly Cys Val	Gln
	185	190	195
Asp Glu Phe Cys	Thr Arg Asp Gly Val	Thr Gly Pro Gly Phe	Thr
	200	205	210
Leu Ser Gly Ser	Cys Cys Gln Gly Ser	Arg Cys Asn Ser Asp	Leu
	215	220	225
Arg Asn Lys Thr	Tyr Phe Ser Pro Arg	Ile Pro Pro Leu Val	Arg
	230	235	240
Leu Pro Pro Pro	Glu Pro Thr Thr Val	Ala Ser Thr Thr Ser	Val
	245	250	255
Thr Thr Ser Thr	Ser Ala Pro Val Arg	Pro Thr Ser Thr Thr	Lys
	260	265	270
Pro Met Pro Ala	Pro Thr Ser Gln Thr	Pro Arg Gln Gly Val	Glu
	275	280	285
His Glu Ala Ser	Arg Asp Glu Glu Pro	Gly Leu Thr Gly Gly	Ala
	290	295	300
Ala Gly His Gln	Asp Arg Ser Asn Ser	Gly Gln Tyr Pro Ala	Lys
	305	310	315
Gly Gly Pro Gln	Gln Pro His Asn Lys	Gly Cys Val Ala Pro	Thr
	320	325	330
Ala Gly Leu Ala	Ala Leu Leu Leu Ala	Val Ala Ala Gly Val	Leu
	335	340	345

Leu

<210> 198  
 <211> 1657  
 <212> DNA  
 <213> Homo sapiens

<400> 198  
 cgggactcgg cggttcctcc tgggagtcctc ggaggggacc ggctgtgcag 50  
 acgccatgga gttggtgctg gtcttcctct gcagcctgct ggcccccatg 100  
 gtctcggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150  
 tgattaccag accctgagga ttgggggact ggtgttcgct gtggtcctct 200  
 tctcggttgg gatcctcctt atcctaagtc gcaggtgcaa gtgcagtctc 250  
 aatcagaagc ccggggcccc aggagatgag gaagcccagg tggagaacct 300  
 catcaccgcc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350  
 catcaggtag aagcctctgg aacctgaggc ggctgcttga accttggat 400  
 gcaaatgtcg atgcttaaga aaaccggcca cttcagcaac agccctttcc 450  
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacac 500  
 cattctccca cctgatgatg caactaacac ttgcctcccc actgcagcct 550  
 gcggtcctgc ccacctcccg tgatgtgtgt gtgtgtgtgt gtgtgtgact 600  
 gtgtgtgttt gctaaactgt gtcttttggt ctactgttt ttggatggta 650  
 ttgtgtttgt tagtgaactg tggactcgct tcccaggca ggggctgagc 700  
 caccatggca tctgtctctc cctgcccccg tggccctcca tcacctctg 750  
 ctctaggag gctgcttgtt gcccgagacc agccccctcc cctgatttag 800  
 ggatgcgtag ggtaagagca cgggcagtag tcttcagtcg tcttgggacc 850  
 tgggaagggt tgtagcactt tgtcatcatt cttcatggac tcctttcaact 900  
 cctttaacaa aaaccttgct tccttatccc acctgatccc agtctgaagg 950  
 tctcttagca actggagata caaagcaagg agctgggtgag ccagcgttg 1000  
 acgtcaggca ggctatgccc ttccgtggtt aatttcttcc caggggcttc 1050  
 cacgaggagt ccccatctgc cccgcccctt cacagagcgc ccggggatcc 1100  
 caggccccag gcttctactc tgccccctgg gaatgtgtcc cctgcatatc 1150  
 ttctcagcaa taactccatg ggctotggga cctaccacct tccaaccttc 1200  
 cctgcttctg agacttcaat ctacagccca gctcatccag atgcagacta 1250  
 cagtcctctg aattgggtct ctggcaggca atagttgaag gactcctgtt 1300  
 ccgttggggc cagcacaccg ggatggatgg agggagagca gaggcctttg 1350  
 cttctctgcc tacgtccctt tagatgggca gcagaggcaa ctcccccatc 1400

ctttgctctg cctgtcgggtg gtcagagcgg tgagcgaggt gggttggaga 1450  
ctcagcaggc tccgtgcagc ccttggaac agtgagaggt tgaaggtcat 1500  
aacgagagt ggaactcaac ccagatccc cccctcctgt cctctgtgtt 1550  
cccgcgaaa ccaaccaaac cgtgcgtgt gacccattgc tgttctctgt 1600  
atcgtgatct atctcaaca acaacagaaa aaaggaataa aatatacttt 1650  
gtttcct 1657

<210> 199  
<211> 120  
<212> PRT  
<213> Homo sapiens

<400> 199  
Met Glu Leu Val Leu Val Phe Leu Cys Ser Leu Leu Ala Pro Met  
1 5 10 15  
Val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe  
20 25 30  
His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala  
35 40 45  
Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg  
50 55 60  
Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu  
65 70 75  
Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro  
80 85 90  
Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp  
95 100 105  
Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala  
110 115 120

<210> 200  
<211> 415  
<212> DNA  
<213> Homo sapiens

<400> 200  
aaacttgacg ccatgaagat cccggtcctt cctgccgtgg tgctcctctc 50  
cctcctggtg ctccactctg cccaggagc caccctgggt ggtcctgagg 100  
aagaaagcac cattgagaat tatgcgtcac gacccgaggc cttaaacacc 150  
ccgttctcga acatogacaa attgcgatct gcgttaagg ctgatgagtt 200  
cctgaactgg cagccctct ttgagtctat caaaaggaaa cttcctttcc 250  
tcaactggga tgcttttct aagctgaaag gactgaggag cgcaactcct 300  
gatgccagat gacctgacc tccactggaa gagggggcta gcgtgagcgc 350  
tgattctcaa cctaccataa ctctttcctg cctcaggaac tccaataaaa 400

cattttccat ccaa 415

<210> 201  
<211> 99  
<212> PRT  
<213> Homo sapiens

<400> 201  
Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu 15  
1 5 10  
Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu 30  
20 25  
Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn 45  
35 40  
Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala 60  
50 55  
Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg 75  
65 70  
Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly 90  
80 85  
Leu Arg Ser Ala Thr Pro Asp Ala Gln 95

<210> 202  
<211> 678  
<212> DNA  
<213> Homo sapiens

<400> 202  
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cagcaggagt ctcccaggtt gttcttctcc agccagttcc aatcaggag 150  
acaggtccca aggccatggg agatctctcc tgtggctttg ccggccactc 200  
atgagagtgt ttttgtgtaa agtatattttt agaatactgt tgacttcttc 250  
atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300  
tcaacctca aatttttggt atactagatg gcttcattt acccaccact 350  
attttaaggt ccttttattt ttaggttcaa ggttcattt aactgagaaa 400  
gtgcccttct gcagcttcac tgattttggt tatcttcaact attaattgta 450  
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cctgggtgcc cctgacacat ttatgtagtg atcccacaaa tgtgattggt 550  
aatttaaatg ttattctaata attagtagatc tcagttgtga tgtaatatga 600  
ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650  
atttgtatag aaagactgaa tagtgatg 678

<210> 203  
 <211> 52  
 <212> PRT  
 <213> Homo sapiens

<400> 203  
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu  
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 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro  
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 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser  
 35 40 45  
 Cys Gly Phe Ala Gly His Ser  
 50

<210> 204  
 <211> 1917  
 <212> DNA  
 <213> Homo sapiens

<400> 204  
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 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200  
 tgggtgcata gaagaggatc taactccttt ccgaggaggc atctccagga 250  
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 tatcatgtat cctgcttggc cattttggga agggggacct gctgtttggc 550  
 caatttatcc tacaggctct ggacgggtgg acctcttcag agaagatctg 600  
 gtaaggtcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650  
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 ctgcaagttt ccggttttaa cactctctcc tgtgtggctc actgttttcc 900  
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 ctatagtagt catcatagga ccatagtcct ctttgtggca acagatctca 1250  
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 agcaactctt gagaagatt taaaatgtgt ctaatacact gatatgaagc 1400  
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 tgaacccaac tctaccttcc attttcttaa gaccaatcac agcttgtgcc 1500  
 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550  
 tgtgatgatg ccccttgtcc cattatttgg agcagaaaaa tcgtcatttg 1600  
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 aatgatgtag gagttctctt ttgtaaaacc ataaactctg ttactcagga 1800  
 ggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850  
 caattggatt tcaggttccc ttttgtgcc ttcatgccct acttcttaat 1900  
 gcctctctaa agccaaa 1917

<210> 205

<211> 392

<212> PRT

<213> Homo sapiens

<400> 205

Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu  
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Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser  
 20 25 30

Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn  
 35 40 45

Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val  
 50 55 60

Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys  
 65 70 75

Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln  
 80 85 90

Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

	95	100	105
Ser Arg Cys Ser	Gly Val Glu His Phe	Ile Leu Glu Val Ile	Gly
	110	115	120
Arg Leu Pro Asp	Met Glu Met Val Ile	Asn Val Arg Asp Tyr	Pro
	125	130	135
Gln Val Pro Lys	Trp Met Glu Pro Ala	Ile Pro Val Phe Ser	Phe
	140	145	150
Ser Lys Thr Ser	Glu Tyr His Asp Ile	Met Tyr Pro Ala Trp	Thr
	155	160	165
Phe Trp Glu Gly	Gly Pro Ala Val Trp	Pro Ile Tyr Pro Thr	Gly
	170	175	180
Leu Gly Arg Trp	Asp Leu Phe Arg Glu	Asp Leu Val Arg Ser	Ala
	185	190	195
Ala Gln Trp Pro	Trp Lys Lys Lys Asn	Ser Thr Ala Tyr Phe	Arg
	200	205	210
Gly Ser Arg Thr	Ser Pro Glu Arg Asp	Pro Leu Ile Leu Leu	Ser
	215	220	225
Arg Lys Asn Pro	Lys Leu Val Asp Ala	Glu Tyr Thr Lys Asn	Gln
	230	235	240
Ala Trp Lys Ser	Met Lys Asp Thr Leu	Gly Lys Pro Ala Ala	Lys
	245	250	255
Asp Val His Leu	Val Asp His Cys Lys	Tyr Lys Tyr Leu Phe	Asn
	260	265	270
Phe Arg Gly Val	Ala Ala Ser Phe Arg	Phe Lys His Leu Phe	Leu
	275	280	285
Cys Gly Ser Leu	Val Phe His Val Gly	Asp Glu Trp Leu Glu	Phe
	290	295	300
Phe Tyr Pro Gln	Leu Lys Pro Trp Val	His Tyr Ile Pro Val	Lys
	305	310	315
Thr Asp Leu Ser	Asn Val Gln Glu Leu	Leu Gln Phe Val Lys	Ala
	320	325	330
Asn Asp Asp Val	Ala Gln Glu Ile Ala	Glu Arg Gly Ser Gln	Phe
	335	340	345
Ile Arg Asn His	Leu Gln Met Asp Asp	Ile Thr Cys Tyr Trp	Glu
	350	355	360
Asn Leu Leu Ser	Glu Tyr Ser Lys Phe	Leu Ser Tyr Asn Val	Thr
	365	370	375
Arg Arg Lys Gly	Tyr Asp Gln Ile Ile	Pro Lys Met Leu Lys	Thr
	380	385	390

Glu Leu

<210> 206



<211> 1425  
 <212> DNA  
 <213> Homo sapiens

<400> 206  
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 aaagtccagc tttttctaaa aaaaa 1425

<210> 207  
 <211> 262  
 <212> PRT  
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe
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Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr
				20					25				30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro
			35						40				45
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile
			50						55				60
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Phe	Val	Gly
			65					70					75
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr
			80						85				90
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys
			95						100				105
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile
			110						115				120
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala
			125						130				135
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp
			140						145				150
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu
			155						160				165
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Pro
			170						175				180
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His
			185						190				195
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val
			200						205				210
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Ala	Phe	Leu	Leu	Thr
			215						220				225
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu
			230						235				240
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser
			245						250				255
Pro	Gln	Asp	Gly	Glu	Ala	Glu							
				260									

<210> 208  
 <211> 2095  
 <212> DNA

<213> Homo sapiens

<400> 208

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 tttaaaatta cttcaacttt gtgtttttaa atgttttgac gatttcaata 1900  
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950  
 tacttaactg atcagtttat tattgataca tcaactccatt aatgtaaagt 2000  
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 tactgtggtg atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209

<211> 331

<212> PRT

<213> Homo sapiens

<400> 209

Met	Ala	Ser	Ala	Leu	Trp	Thr	Val	Leu	Pro	Ser	Arg	Met	Ser	Leu
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Arg	Ser	Leu	Lys	Trp	Ser	Leu	Leu	Leu	Leu	Ser	Leu	Leu	Ser	Phe
				20					25					30
Phe	Val	Met	Trp	Tyr	Leu	Ser	Leu	Pro	His	Tyr	Asn	Val	Ile	Glu
				35					40					45
Arg	Val	Asn	Trp	Met	Tyr	Phe	Tyr	Glu	Tyr	Glu	Pro	Ile	Tyr	Arg
				50					55					60
Gln	Asp	Phe	His	Phe	Thr	Leu	Arg	Glu	His	Ser	Asn	Cys	Ser	His
				65					70					75
Gln	Asn	Pro	Phe	Leu	Val	Ile	Leu	Val	Thr	Ser	His	Pro	Ser	Asp
				80					85					90
Val	Lys	Ala	Arg	Gln	Ala	Ile	Arg	Val	Trp	Gly	Glu	Lys	Lys	
				95					100					105
Ser	Trp	Trp	Gly	Tyr	Glu	Val	Leu	Thr	Phe	Phe	Leu	Leu	Gly	Gln
				110					115					120
Glu	Ala	Glu	Lys	Glu	Asp	Lys	Met	Leu	Ala	Leu	Ser	Leu	Glu	Asp
				125					130					135
Glu	His	Leu	Leu	Tyr	Gly	Asp	Ile	Ile	Arg	Gln	Asp	Phe	Leu	Asp
				140					145					150
Thr	Tyr	Asn	Asn	Leu	Thr	Leu	Lys	Thr	Ile	Met	Ala	Phe	Arg	Trp
				155					160					165

Val	Thr	Glu	Phe	Cys	Pro	Asn	Ala	Lys	Tyr	Val	Met	Lys	Thr	Asp	
				170					175					180	
Thr	Asp	Val	Phe	Ile	Asn	Thr	Gly	Asn	Leu	Val	Lys	Tyr	Leu	Leu	
				185					190					195	
Asn	Leu	Asn	His	Ser	Glu	Lys	Phe	Phe	Thr	Gly	Tyr	Pro	Leu	Ile	
				200					205					210	
Asp	Asn	Tyr	Ser	Tyr	Arg	Gly	Phe	Tyr	Gln	Lys	Thr	His	Ile	Ser	
				215					220					225	
Tyr	Gln	Glu	Tyr	Pro	Phe	Lys	Val	Phe	Pro	Pro	Tyr	Cys	Ser	Gly	
				230					235					240	
Leu	Gly	Tyr	Ile	Met	Ser	Arg	Asp	Leu	Val	Pro	Arg	Ile	Tyr	Glu	
				245					250					255	
Met	Met	Gly	His	Val	Lys	Pro	Ile	Lys	Phe	Glu	Asp	Val	Tyr	Val	
				260					265					270	
Gly	Ile	Cys	Leu	Asn	Leu	Leu	Lys	Val	Asn	Ile	His	Ile	Pro	Glu	
				275					280					285	
Asp	Thr	Asn	Leu	Phe	Phe	Leu	Tyr	Arg	Ile	His	Leu	Asp	Val	Cys	
				290					295					300	
Gln	Leu	Arg	Arg	Val	Ile	Ala	Ala	His	Gly	Phe	Ser	Ser	Lys	Glu	
				305					310					315	
Ile	Ile	Thr	Phe	Trp	Gln	Val	Met	Leu	Arg	Asn	Thr	Thr	Cys	His	
				320					325					330	

Tyr

<210> 210

<211> 745

<212> DNA

<213> Homo sapiens

<400> 210

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<210> 211  
 <211> 185  
 <212> PRT  
 <213> Homo sapiens

<400> 211  
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 Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu  
 35 40 45  
 His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp  
 50 55 60  
 Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu  
 65 70 75  
 Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val  
 80 85 90  
 Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys  
 95 100 105  
 Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Lys Gly Leu Met  
 110 115 120  
 Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly  
 125 130 135  
 Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala  
 140 145 150  
 Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys  
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 Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly  
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 Asp Thr Val Glu Asn  
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<210> 212  
 <211> 1706  
 <212> DNA  
 <213> Homo sapiens

<400> 212  
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<210> 213

<211> 299

<212> FRT

<213> Homo sapiens

<400> 213

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				20					25					30
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
				35					40					45
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg
				50					55					60
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu
				65					70					75
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala
				80					85					90
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly
				95					100					105
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys
				110					115					120
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys
				125					130					135
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn
				140					145					150
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala
				155					160					165
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr
				170					175					180
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr
				185					190					195
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro
				200					205					210
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys



His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg  
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<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

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ggattgtaat atgaaattat ttaaaagggc ttgcctcata tataggaaaa 200  
tcgcatatgg tcctagtatt aaattnttat tgcttactga tttttttgag 250  
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<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

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<210> 216

<211> 479  
 <212> PRT  
 <213> Homo sapiens

<400> 216

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				20					25					30
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu
				35					40					45
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg
				50					55					60
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser
				65					70					75
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr
				80					85					90
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp
				95					100					105
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr
				110					115					120
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile
				125					130					135
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met
				140					145					150
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly
				155					160					165
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu
				170					175					180
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly
				185					190					195
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu
				200					205					210
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu
				215					220					225
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala
				230					235					240
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp
				245					250					255
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu
				260					265					270
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr
				275					280					285
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu

290										295										300									
Thr	Arg	Phe	Ser	Leu	Leu	Ser	Asp	Ser	Ala	Phe	Asp	Ser	Gly	Arg	Ala	Phe	Asp	Ser	Gly	Arg									
									305											310	315								
Leu	Trp	Leu	Leu	Val	Val	Leu	Cys	Leu	Leu	Arg	Leu	Ala	Val	Thr															
									320												330								
Arg	Pro	His	Leu	Gln	Ala	Tyr	Leu	Cys	Leu	Ala	Lys	Ala	Arg	Val															
									335												345								
Glu	Gln	Leu	Arg	Arg	Glu	Ala	Gly	Arg	Ile	Glu	Ala	Arg	Glu	Ile															
									350												360								
Gln	Gln	Arg	Val	Val	Arg	Val	Tyr	Cys	Tyr	Val	Thr	Val	Val	Ser															
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Leu	Gln	Tyr	Leu	Thr	Pro	Leu	Ile	Leu	Thr	Leu	Asn	Cys	Thr	Leu															
									380												390								
Leu	Leu	Lys	Thr	Leu	Gly	Gly	Tyr	Ser	Trp	Gly	Leu	Gly	Pro	Ala															
									395												405								
Pro	Leu	Leu	Ser	Pro	Asp	Pro	Ser	Ser	Ala	Ser	Ala	Ala	Pro	Ile															
									410												420								
Gly	Ser	Gly	Glu	Asp	Glu	Val	Gln	Gln	Thr	Ala	Ala	Arg	Ile	Ala															
									425												435								
Gly	Ala	Leu	Gly	Gly	Leu	Leu	Thr	Pro	Leu	Phe	Leu	Arg	Gly	Val															
									440												450								
Leu	Ala	Tyr	Leu	Ile	Trp	Trp	Thr	Ala	Ala	Cys	Gln	Leu	Leu	Ala															
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Ser	Leu	Phe	Gly	Leu	Tyr	Phe	His	Gln	His	Leu	Ala	Gly	Ser																
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<210> 217  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 5, 146  
 <223> unknown base

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cttcctcacc aagatgttcc tgacagtgc acggctgtac ttcacgccc 500  
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<210> 218  
<211> 2571  
<212> DNA  
<213> Homo sapiens

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ggctggtttg ggccttgta gctgacagaa ggtggcagg gagaatgcag 200  
cacactgctc ggagaatgaa ggcgcttctg ttgctggtct gccttggtct 250  
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<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

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	35	40	
Arg Arg Ser Gln	Asp Gly Cys Pro Asp	Gly Cys Ala Ser Leu	Thr 60
	50	55	
Ala Thr Ala Pro	Ser Pro Glu Val Ser	Ala Ala Ala Thr Ile	Ser 75
	65	70	
Leu Met Thr Asp	Glu Pro Gly Leu Asp	Asn Pro Ala Tyr Val	Ser 90
	80	85	
Ser Ala Glu Asp	Gly Gln Pro Ala Ile	Ser Pro Val Asp Ser	Gly 105
	95	100	
Arg Ser Asn Arg	Thr Arg Ala Arg Pro	Phe Glu Arg Ser Thr	Ile 120
	110	115	
Arg Ser Arg Ser	Phe Lys Lys Ile Asn	Arg Ala Leu Ser Val	Leu 135
	125	130	
Arg Arg Thr Lys	Ser Gly Ser Ala Val	Ala Asn His Ala Asp	Gln 150
	140	145	
Gly Arg Glu Asn	Ser Glu Asn Thr Thr	Ala Pro Glu Val Phe	Pro 165
	155	160	
Arg Leu Tyr His	Leu Ile Pro Asp Gly	Glu Ile Thr Ser Ile	Lys 180
	170	175	
Ile Asn Arg Val	Asp Pro Ser Glu Ser	Leu Ser Ile Arg Leu	Val 195
	185	190	
Gly Gly Ser Glu	Thr Pro Leu Val His	Ile Ile Ile Gln His	Ile 210
	200	205	
Tyr Arg Asp Gly	Val Ile Ala Arg Asp	Gly Arg Leu Leu Pro	Gly 225
	215	220	
Asp Ile Ile Leu	Lys Val Asn Gly Met	Asp Ile Ser Asn Val	Pro 240
	230	235	
His Asn Tyr Ala	Val Arg Leu Leu Arg	Gln Pro Cys Gln Val	Leu 255
	245	250	
Trp Leu Thr Val	Met Arg Glu Gln Lys	Phe Arg Ser Arg Asn	Asn 270
	260	265	
Gly Gln Ala Pro	Asp Ala Tyr Arg Pro	Arg Asp Asp Ser Phe	His 285
	275	280	
Val Ile Leu Asn	Lys Ser Ser Pro Glu	Glu Gln Leu Gly Ile	Lys 300
	290	295	
Leu Val Arg Lys	Val Asp Glu Pro Gly	Val Phe Ile Phe Asn	Val 315
	305	310	
Leu Asp Gly Gly	Val Ala Tyr Arg His	Gly Gln Leu Glu Glu	Asn

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His	Leu	Val	Val	365	Ser	Arg	Gln	Val	Arg	Gln	Arg	Ser	Pro	Asp	Ile	375			
Phe	Gln	Glu	Ala	380	Gly	Trp	Asn	Ser	Asn	Gly	Ser	Trp	Ser	Pro	Gly	390			
Pro	Gly	Glu	Arg	395	Ser	Asn	Thr	Pro	Lys	Pro	Leu	His	Pro	Thr	Ile	405			
Thr	Cys	His	Glu	410	Lys	Val	Val	Asn	Ile	Gln	Lys	Asp	Pro	Gly	Glu	420			
Ser	Leu	Gly	Met	425	Thr	Val	Ala	Gly	Gly	Ala	Ser	His	Arg	Glu	Trp	435			
Asp	Leu	Pro	Ile	440	Tyr	Val	Ile	Ser	Val	Glu	Pro	Gly	Gly	Val	Ile	450			
Ser	Arg	Asp	Gly	455	Arg	Ile	Lys	Thr	Gly	Asp	Ile	Leu	Leu	Asn	Val	465			
Asp	Gly	Val	Glu	470	Leu	Thr	Glu	Val	Ser	Arg	Ser	Glu	Ala	Val	Ala	480			
Leu	Leu	Lys	Arg	485	Thr	Ser	Ser	Ser	Ile	Val	Leu	Lys	Ala	Leu	Glu	495			
Val	Lys	Glu	Tyr	500	Glu	Pro	Gln	Glu	Asp	Cys	Ser	Ser	Pro	Ala	Ala	510			
Leu	Asp	Ser	Asn	515	His	Asn	Met	Ala	Pro	Pro	Ser	Asp	Trp	Ser	Pro	525			
Ser	Trp	Val	Met	530	Trp	Leu	Glu	Leu	Pro	Arg	Cys	Leu	Tyr	Asn	Cys	540			
Lys	Asp	Ile	Val	545	Leu	Arg	Arg	Asn	Thr	Ala	Gly	Ser	Leu	Gly	Phe	555			
Cys	Ile	Val	Gly	560	Gly	Tyr	Glu	Glu	Tyr	Asn	Gly	Asn	Lys	Pro	Phe	570			
Phe	Ile	Lys	Ser	575	Ile	Val	Glu	Gly	Thr	Pro	Ala	Tyr	Asn	Asp	Gly	585			
Arg	Ile	Arg	Cys	590	Gly	Asp	Ile	Leu	Leu	Ala	Val	Asn	Gly	Arg	Ser	600			
Thr	Ser	Gly	Met	605	Ile	His	Ala	Cys	Leu	Ala	Arg	Leu	Leu	Lys	Glu	615			
Leu	Lys	Gly	Arg	620	Ile	Thr	Leu	Thr	Ile	Val	Ser	Trp	Pro	Gly	Thr	630			
Phe	Leu																		



<210> 220  
 <211> 773  
 <212> DNA  
 <213> Homo sapiens

<400> 220  
 ccaaaagtgat catttgaaaa agagatatcc acatottcaa goccataata 50  
 aggatagaag ctgcacaggg cagctttact tactccagca ctttcctctc 100  
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150  
 gtttttaaca tcatcagccc aagcaacaat ggtggcaatg ttcaggagac 200  
 agtgacaatt gataatgaaa aaaataccgc catcgtaac atccatgcag 250  
 gatcatgctc ttctaccaca atttttgact ataacatgg ctacattgca 300  
 tccagggtgc tctccgaag agcctgcttt atcctgaaga tggaccatca 350  
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400  
 ctctgggaca catgttctcc aacaaatata cctgggtcaa gtacaacct 450  
 ctggagctc tgatcaaaga cgtggattgg ttcctgctg ggtcaacct 500  
 tgagaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550  
 acacacataa tgtcgggtgc ggaggctgtg caaaggctgg gtcctcgggc 600  
 atcttgggaa ttcaatctg tgcagacatt catgttttag atgattagcc 650  
 ctctgtgttt atcttttoaa agaaatacat ccttggttta cactcaaaag 700  
 tcaaattaaa ttctttccca atgcccacac taattttgag attcagtcag 750  
 aaaatataaa tgctgtatatt ata 773

<210> 221  
 <211> 184  
 <212> PRT  
 <213> Homo sapiens

<400> 221  
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly  
 1 5 10  
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser  
 20 25 30  
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu  
 35 40 45  
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser  
 50 55 60  
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val  
 65 70 75  
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn  
 80 85 90

Ile Pro Pro Leu Asn Asn Leu Gln Trp Tyr Ile Tyr Glu Lys Gln  
95 105

Ala Leu Asp Asn Met Phe Ser Asn Lys Tyr Thr Trp Val Lys Tyr  
110 115 120

Asn Pro Leu Glu Ser Leu Ile Lys Asp Val Asp Trp Phe Leu Leu  
125 130 135

Gly Ser Pro Ile Glu Lys Leu Cys Lys His Ile Pro Leu Tyr Lys  
140 145 150

Gly Glu Val Val Glu Asn Thr His Asn Val Gly Ala Gly Gly Cys  
155 160 165

Ala Lys Ala Gly Leu Leu Gly Ile Leu Gly Ile Ser Ile Cys Ala  
170 175 180

Asp Ile His Val

<210> 222

<211> 992

<212> DNA

<213> Homo sapiens

<400> 222

ggcacgagcc aggaactagg aggtttcac tgcccagca gaggccctac 50

acccaccgag gcatggggct ccttgggctg ttctgcttgg cctgtgtggc 100

tgccagcagc ttctccaagg caggggagga agaaattacc cctgtgtgtc 150

ccattgccta caaagtcctg gaagttttcc ccaaaggcgg ctgggtgtgc 200

ataacctgct gtgcacccca gccaccacgg cccatcacct attccctctg 250

tggaaccaag aacatcaagg tggccaagaa ggtgtgtaag acccacgagc 300

cggcctcctt caacctcaac gtcacactca agtccagtcc agacctgtgc 350

acctacttct gccgggcgtc ctccacctca ggtgcccatg tggacagtgc 400

caggctacag atgcactggg agctgtgtgc caagccagtg tctgagctgc 450

gggccaactt cactctgcag gacagagggg caggcccccag ggtggagatg 500

atctgccagg cgtctctggg cagcccacct atcaccaaca gctgatcgg 550

gaaggatggg caggtccacc tgcagcagag accatgccac aggcagcctg 600

ccaacttctc ctctctgcgg agccagacat cggactgggt ctgggtgccg 650

gctgcaaaca acgccaatgt ccagcacagc gccctcacag tgggtgcccc 700

aggtgtgtgac cagaagatgg aggactggca gggccccctg gagagcccca 750

tccttgccct gccgctctac aggagcacc gccgtctgag tgaagaggag 800

tttggggggt tcaggatagg gaatggggag gtcagaggac gcaagcagc 850

agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactgtt cgtatttgga gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met	Gly	Leu	Pro	Gly	Leu	Phe	Cys	Leu	Ala	Val	Leu	Ala	Ala	Ser
1				5					10					15
Ser	Phe	Ser	Lys	Ala	Arg	Glu	Glu	Glu	Ile	Thr	Pro	Val	Val	Ser
				20					25					30
Ile	Ala	Tyr	Lys	Val	Leu	Glu	Val	Phe	Pro	Lys	Gly	Arg	Trp	Val
				35					40					45
Leu	Ile	Thr	Cys	Cys	Ala	Pro	Gln	Pro	Pro	Pro	Pro	Ile	Thr	Tyr
				50					55					60
Ser	Leu	Cys	Gly	Thr	Lys	Asn	Ile	Lys	Val	Ala	Lys	Lys	Val	Val
				65					70					75
Lys	Thr	His	Glu	Pro	Ala	Ser	Phe	Asn	Leu	Asn	Val	Thr	Leu	Lys
				80					85					90
Ser	Ser	Pro	Asp	Leu	Leu	Thr	Tyr	Phe	Cys	Arg	Ala	Ser	Ser	Thr
				95					100					105
Ser	Gly	Ala	His	Val	Asp	Ser	Ala	Arg	Leu	Gln	Met	His	Trp	Glu
				110					115					120
Leu	Trp	Ser	Lys	Pro	Val	Ser	Glu	Leu	Arg	Ala	Asn	Phe	Thr	Leu
				125					130					135
Gln	Asp	Arg	Gly	Ala	Gly	Pro	Arg	Val	Glu	Met	Ile	Cys	Gln	Ala
				140					145					150
Ser	Ser	Gly	Ser	Pro	Pro	Ile	Thr	Asn	Ser	Leu	Ile	Gly	Lys	Asp
				155					160					165
Gly	Gln	Val	His	Leu	Gln	Gln	Arg	Pro	Cys	His	Arg	Gln	Pro	Ala
				170					175					180
Asn	Phe	Ser	Phe	Leu	Pro	Ser	Gln	Thr	Ser	Asp	Trp	Phe	Trp	Cys
				185					190					195
Gln	Ala	Ala	Asn	Asn	Ala	Asn	Val	Gln	His	Ser	Ala	Leu	Thr	Val
				200					205					210
Val	Pro	Pro	Gly	Gly	Asp	Gln	Lys	Met	Glu	Asp	Trp	Gln	Gly	Pro
				215					220					225
Leu	Glu	Ser	Pro	Ile	Leu	Ala	Leu	Pro	Leu	Tyr	Arg	Ser	Thr	Arg
				230					235					240
Arg	Leu	Ser	Glu	Glu	Glu	Phe	Gly	Gly	Phe	Arg	Ile	Gly	Asn	Gly
				245					250					255
Glu	Val	Arg	Gly	Arg	Lys	Ala	Ala	Ala	Met					
				260					265					

<210> 224  
<211> 1297  
<212> DNA  
<213> Homo sapiens

<400> 224  
ggtccttaat ggcagcagcc gccgctacca agatccttct gtgcctcccg 50  
ctctctgtctc tgctgtccgg ctgggtcccg gctgggagag ccgaccctca 100  
ctctctttgc tatgacatca ccgtcatocc taagttcaga cctggaccac 150  
ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttcaatat 200  
gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250  
aaatgtcaca acggcctgga aagcacagaa cccagtactg agagagggtg 300  
tggacatact tacagagcaa ctgctgtaca ttcagtgtga gaattacaca 350  
cccaaggaac cctcacctc gcaggcaagg atgtcttgtg agcagaaagc 400  
tgaaggacac agcagtgatg cttggcagtt cagtttcgat gggcagatct 450  
tcctctctct tgactcagag aagagaatgt ggacaacggt tcatctctga 500  
gccagaaaaa tgaagaaaaa gtgggagaat gacaagggtg tggccatgtc 550  
cttccattac ttctcaatgg gagactgtat aggatggctt gaggactttc 600  
tgatgggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650  
atgtcctcag gcacaaccca actcagggcc acagccacca cctcatctct 700  
ttgtctgctc ctcctctcc tccctgctt cctctcctt ggcctctgag 750  
gagagtctct tagagtaca ggttaaagct gataccaaaa ggcctctgtg 800  
agcagggtct tgatcaaact cgccttctg tctggccagc tgccacagac 850  
ctacggtgta tgcctcagg cctccagcag atcatgatga catcatggac 900  
ccaatagctc attcactgcc ttgattcctt ttgccaaca ttttaccago 950  
agttatacct aacatattat gcaattttct ctgtgtgcta cctgatggaa 1000  
ttcctgcact taaagttctg gctgactaaa caagatatat catttcttt 1050  
cttctctttt tgtttggaaa atcaagtact tctttgaatg atgatctctt 1100  
tcttgcaaat gatattgtca gtaaaaaaat caggttagac ttcagacctc 1150  
tggggattct ttccgtgtcc tgaagagaaa tttttaaat atttaataag 1200  
aaaaaaaaa tattaatgat tgtttccttt agtaatttat tgtttctgtac 1250  
tgatatttaa ataaagagtt ctatttccca aaaaaaaaaa aaaaaaa 1297

<210> 225  
<211> 246  
<212> PRT  
<213> Homo sapiens

<400> 225

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu  
1 5 10 15  
Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro  
20 25 30  
His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro  
35 40 45  
Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr  
50 55 60  
Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser  
65 70 75  
Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln  
80 85 90  
Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu  
95 100 105  
Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr  
110 115 120  
Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser  
125 130 135  
Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu  
140 145 150  
Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala  
155 160 165  
Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met  
170 175 180  
Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu  
185 190 195  
Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly  
200 205 210  
Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr  
215 220 225  
Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys  
230 235 240  
Phe Ile Leu Pro Gly Ile  
245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

gggaaagcca ttctgaaac ccattctatac aaactatata ttttcatttc 50  
tgctgctagc tgccttgggc ctacacaattt tcattctgtt ttctgacttt 100  
caagttatat accgtggaat ggagttgatc ccaaccataa catcgtggag 150

gggtttaatt ttggtggtag cctcaccaca attctgggtg ggctttcttt 200  
 gcagaggatt ccacattcaa aatcatgaac tctggctgtt gatcaaaaga 250  
 gaatttgat tctactctaa aagtcaatat aggaactggc aaaagaagct 300  
 agcagaagac tcaactggc ctcccataaa caggacagat tattcagggtg 350  
 atggcaaaaa tggattctac atcaacggag gctatgaaag ccatgaacag 400  
 attccaaaaa gaaaactcaa attgggaggc caaccacag aacagcattt 450  
 ctgggccagg ctgtaatcag aattgtcgtc gtacatgctc aacagcattg 500  
 cttttttccc caaaattaac acattgtgga gaagtgatga tactctcccc 550  
 ttacctttcc tctctccatt caagcattca aagtatat tcaatgaatt 600  
 aaaccttgca gcaagggacc ttagataggc ttattctgac tgtatgcttt 650  
 accaatgaga gaaaaaaatg catttcctgt atcatcottt tcaataaact 700  
 gtattcattt tgaaaaaaaa aaaaaaaaaa aaaaa 735

<210> 227

<211> 115

<212> PRT

<213> Homo sapiens

<400> 227

Met	Glu	Leu	Ile	Pro	Thr	Ile	Thr	Ser	Trp	Arg	Val	Leu	Ile	Leu
1				5					10					15
Val	Val	Ala	Leu	Thr	Gln	Phe	Trp	Cys	Gly	Phe	Leu	Cys	Arg	Gly
				20					25					30
Phe	His	Leu	Gln	Asn	His	Glu	Leu	Trp	Leu	Leu	Ile	Lys	Arg	Glu
				35					40					45
Phe	Gly	Phe	Tyr	Ser	Lys	Ser	Gln	Tyr	Arg	Thr	Trp	Gln	Lys	Lys
				50					55					60
Leu	Ala	Glu	Asp	Ser	Thr	Trp	Pro	Pro	Ile	Asn	Arg	Thr	Asp	Tyr
				65					70					75
Ser	Gly	Asp	Gly	Lys	Asn	Gly	Phe	Tyr	Ile	Asn	Gly	Gly	Tyr	Glu
				80					85					90
Ser	His	Glu	Gln	Ile	Pro	Lys	Arg	Lys	Lys	Lys	Leu	Gly	Gly	Gln
				95					100					105
Pro	Thr	Glu	Gln	His	Phe	Trp	Ala	Arg	Leu					
				110					115					

<210> 228

<211> 2185

<212> DNA

<213> Homo sapiens

<400> 228

gttctccttt ccgagccaaa atcccaggcg atggtgaatt atgaacgtgc 50  
 cacacatga agctcttctg gcaggttaact gtgcaccacc acacctggaa 100

tgccatcctg ctcccgttcg tctacctcac ggcgcaagtg tggattctgt 150  
 gtgcagccat cgctgctgcc gcttcagccg ggcacagaa ctgcccctcc 200  
 gtttgctcgt gcagtaacca gttcagcaag gtggtgtgca cgcgccgggg 250  
 cctctccagg gtcccgcagg gtattccctc gaacaccccg tacctcaacc 300  
 tcattggagaa caacatccag atgatccagg ccgacacctt ccgccacctc 350  
 caccacctgg aggtcctgca gttgggcagg aactccatcc gcgagattga 400  
 ggtggggggc ttcaacggcc tggccagcct caacacccct gagctgttcg 450  
 acaactggct gacagtcac cctagcgggg ccttgaata cctgtccaag 500  
 ctgcggggagc tctggcttcg caacaacccc atcgaaagca tcccctctta 550  
 cgcttcaac cgggtgccct cctcatgcg cctggacttg ggggagctca 600  
 agaagctgga gtatatctct gagggagctt ttgaggggct gttcaacctc 650  
 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700  
 ccccctggtg gggctggagg agctggagat gtcagggaac cacttccctg 750  
 agatcaggcc tggctccttc catggcctga gctccctcaa gaagctctgg 800  
 gtcatgaact cacaggctcag cctgattgag cggaatgctt ttgacgggct 850  
 ggcttcactt gtggaactca acttggccca caataacctc tcttcttttc 900  
 cccatgacct ctttaccocc ctgagggtacc tgggtggagt gcactctaac 950  
 cacaaccttt ggaactgtga ttgtgacatt ctgtggctag cctggtggct 1000  
 tcgagagtat ataccoccca attccacctg ctgtggccgc tgctcatgctc 1050  
 ccatgcacat gcgagggccg tacctcgttg aggtggacca ggcctccttc 1100  
 cagtgccttg ccccttcat catggacgca cctcgagacc tcaacatttc 1150  
 tgaggggtcg atggcagaac ttaagtgtcg gactccccct atgtcctccg 1200  
 tgaagtgttt gctgccaat gggacagtgc tcagccacgc ctcccgcac 1250  
 ccaagagtct ctgtcctcaa cgacggcacc ttgaactttt cccagtgctc 1300  
 gctttcagac actgggggtg acacatgcac ggtgaccaat gttgcaggca 1350  
 actccaacgc ctgcgcctac ctcaatgtga gcacggctga gcttaacacc 1400  
 tccaactaca gcttcttcac cacagtaaca gtggagacca cggagatctc 1450  
 gcttgaggac acaacgcgaa agtacaagcc tgttcttacc acgtccactg 1500  
 gttaccagcc ggcataatac acctctacca cgggtgctcat tcagactacc 1550  
 cgtgtgccca agcagggtggc agtaccgccg acagacacca ctgacaagat 1600  
 gcagaccagc ctggatgaag tcattgaagc caccaagatc atcattggct 1650  
 gctttgtggc agtgactctg cttagctgcc ccatgttgat tgtcttctat 1700

aaacttcgta agcggcacca gcagcggagt acagtcacag ccgcccggac 1750  
 tgttgagata atccaggtgg acgaagacat cccagcagca acatccgcag 1800  
 cagcaacacag agtcccgtcc ggtgtatcag gtgagggggc agtagtgctg 1850  
 ccacaattc atgaccatat taactacaac acctacaaac cagcacatgg 1900  
 ggccactgag acagaaaaaca gcctggggaa ctctctgcac cccacagtca 1950  
 ccactatctc tgaacottat ataattcaga ccataccaa ggacaaggta 2000  
 caggaaactc aaatatgact cccctcccc aaaaaactta taaatgcaa 2050  
 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100  
 ttcttgata tgcttatata ttaagtctat gggtgtgta aaaaaaacag 2150  
 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229

<211> 653

<212> PRT

<213> Homo sapiens

<400> 229

Met	Lys	Leu	Leu	Trp	Gln	Val	Thr	Val	His	His	His	Thr	Trp	Asn	1	5	10	15
Ala	Ile	Leu	Leu	Pro	Phe	Val	Tyr	Leu	Thr	Ala	Gln	Val	Trp	Ile	20	25	30	35
Leu	Cys	Ala	Ala	Ile	Ala	Ala	Ala	Ala	Ser	Ala	Gly	Pro	Gln	Asn	40	45	50	55
Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val	Val	60	65	70	75
Cys	Thr	Arg	Arg	Gly	Leu	Ser	Glu	Val	Pro	Gln	Gly	Ile	Pro	Ser	80	85	90	95
Asn	Thr	Arg	Tyr	Leu	Asn	Leu	Met	Glu	Asn	Asn	Ile	Gln	Met	Ile	100	105	110	115
Gln	Ala	Asp	Thr	Phe	Arg	His	Leu	His	His	Leu	Glu	Val	Leu	Gln	120	125	130	135
Leu	Gly	Arg	Asn	Ser	Ile	Arg	Gln	Ile	Glu	Val	Gly	Ala	Phe	Asn	140	145	150	155
Gly	Leu	Ala	Ser	Leu	Asn	Thr	Leu	Glu	Phe	Asp	Asn	Trp	Leu	Leu	160	165	170	175
Thr	Val	Ile	Pro	Ser	Gly	Ala	Phe	Glu	Tyr	Leu	Ser	Lys	Leu	Arg	180	185	190	195
Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser	Tyr	200	205	210	215
Ala	Phe	Asn	Arg	Val	Pro	Ser	Leu	Met	Arg	Leu	Asp	Leu	Gly	Glu	220	225	230	235
Leu	Lys	Lys	Leu	Glu	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	Leu	240	245	250	255



	185		190		195
Phe Asn Leu Lys	Tyr Leu Asn Leu Gly	Met Cys Asn Ile Lys	Asp		
	200		205		210
Met Pro Asn Leu Thr	Pro Leu Val Gly	Leu Glu Glu Leu Glu	Met		
	215		220		225
Ser Gly Asn His	Phe Pro Glu Ile Arg	Pro Gly Ser Phe His	Gly		
	230		235		240
Leu Ser Ser Leu	Lys Lys Leu Trp Val	Met Asn Ser Gln Val	Ser		
	245		250		255
Leu Ile Glu Arg	Asn Ala Phe Asp Gly	Leu Ala Ser Leu Val	Glu		
	260		265		270
Leu Asn Leu Ala	His Asn Asn Leu Ser	Ser Leu Pro His Asp	Leu		
	275		280		285
Phe Thr Pro Leu	Arg Tyr Leu Val Glu	Leu His Leu His His	Asn		
	290		295		300
Pro Trp Asn Cys	Asp Cys Asp Ile Leu	Trp Leu Ala Trp Trp	Leu		
	305		310		315
Arg Glu Tyr Ile	Pro Thr Asn Ser Thr	Cys Cys Gly Arg Cys	His		
	320		325		330
Ala Pro Met His	Met Arg Gly Arg Tyr	Leu Val Glu Val Asp	Gln		
	335		340		345
Ala Ser Phe Gln	Cys Ser Ala Pro Phe	Ile Met Asp Ala Pro	Arg		
	350		355		360
Asp Leu Asn Ile	Ser Glu Gly Arg Met	Ala Glu Leu Lys Cys	Arg		
	365		370		375
Thr Pro Pro Met	Ser Ser Val Lys Trp	Leu Leu Pro Asn Gly	Thr		
	380		385		390
Val Leu Ser His	Ala Ser Arg His Pro	Arg Ile Ser Val Leu	Asn		
	395		400		405
Asp Gly Thr Leu	Asn Phe Ser His Val	Leu Ser Asp Thr	Gly		
	410		415		420
Val Tyr Thr Cys	Met Val Thr Asn Val	Ala Gly Asn Ser Asn	Ala		
	425		430		435
Ser Ala Tyr Leu	Asn Val Ser Thr Ala	Glu Leu Asn Thr Ser	Asn		
	440		445		450
Tyr Ser Phe Phe	Thr Thr Val Thr Val	Glu Thr Thr Glu Ile	Ser		
	455		460		465
Pro Glu Asp Thr	Thr Arg Lys Tyr Lys	Pro Val Pro Thr Thr	Ser		
	470		475		480
Thr Gly Tyr Gln	Pro Ala Tyr Thr Thr	Ser Thr Thr Val Leu	Ile		
	485		490		495
Gln Thr Thr Arg	Val Pro Lys Gln Val	Ala Val Pro Ala Thr	Asp		

500	505	510
Thr Thr Asp Lys Met Gln Thr Ser Leu	Asp Glu Val Met Lys Thr	
515	520	525
Thr Lys Ile Ile Ile Gly Cys Phe Val	Ala Val Thr Leu Leu Ala	
530	535	540
Ala Ala Met Leu Ile Val Phe Tyr Lys	Leu Arg Lys Arg His Gln	
545	550	555
Gln Arg Ser Thr Val Thr Ala Ala Arg	Thr Val Glu Ile Ile Gln	
560	565	570
Val Asp Glu Asp Ile Pro Ala Ala Thr	Ser Ala Ala Ala Thr Ala	
575	580	585
Ala Pro Ser Gly Val Ser Gly Glu Gly	Ala Val Val Leu Pro Thr	
590	595	600
Ile His Asp His Ile Asn Tyr Asn Thr	Tyr Lys Pro Ala His Gly	
605	610	615
Ala His Trp Thr Glu Asn Ser Leu Gly	Asn Ser Leu His Pro Thr	
620	625	630
Val Thr Thr Ile Ser Glu Pro Tyr Ile	Ile Gln Thr His Thr Lys	
635	640	645
Asp Lys Val Gln Glu Thr Gln Ile		
650		

<210> 230

<211> 2846

<212> DNA

<213> Homo sapiens

<400> 230

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 tacacagtca ttaatgaagc ctgcccttga gcagagtgga atatcatgtg 150  
 tcgggagtgc tgtgaatatg atcagattga gtgcgtctgc cccggaaga 200  
 ggggaagtctg gggttatacc atcccttgct gcaggaaatga ggagaatgag 250  
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 gagctgccga aatggctcat gggggggtac cttggatgac ttctatgtga 350  
 aggggttcta ctgtgcagag tgccgagcag gctggtaagg aggagactgc 400  
 atgcgatgtg gccaggttct gcgagcccca aagggtcaga ttttgttgga 450  
 aagctatccc ctaaatgctc actgtgaatg gaccattcat gctaaacctg 500  
 ggtttgtcat ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550  
 atgtgccagt atgactatgt tgaggttcgt gatggagaca accgcgatgg 600  
 ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataggatc ctoactccac gtcctcttcc actccgatgg ctccaagaat 700  
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 cccttgtttc catgacggca cgtgcgtcct tgacaaggct ggtatcttaca 800  
 agtgtgcctg cttggcaggc tatactgggc agcgtctgtg aaatctcctt 850  
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 aaaagaactt gccagcagaa tggagagtgg tcagggaaac agcccatctg 1050  
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<210> 231  
<211> 720  
<212> PRT  
<213> Homo sapiens

<400> 231  
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20 25 30  
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys  
35 40 45  
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu  
50 55 60  
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu  
65 70 75  
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn  
80 85 90  
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp  
95 100 105  
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp  
110 115 120  
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro  
125 130 135  
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys  
140 145 150  
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg  
155 160 165

Phe Val Met Leu Ser Leu Glu Phe Asp Tyr Met Cys Gln Tyr Asp	170	175	180
Tyr Val Glu Val Arg Asp Gly Asp Asn Arg Asp Gly Gln Ile Ile	185	190	195
Lys Arg Val Cys Gly Asn Glu Arg Pro Ala Pro Ile Gln Ser Ile	200	205	210
Gly Ser Ser Leu His Val Leu Phe His Ser Asp Gly Ser Lys Asn	215	220	225
Phe Asp Gly Phe His Ala Ile Tyr Glu Glu Ile Thr Ala Cys Ser	230	235	240
Ser Ser Pro Cys Phe His Asp Gly Thr Cys Val Leu Asp Lys Ala	245	250	255
Gly Ser Tyr Lys Cys Ala Cys Leu Ala Gly Tyr Thr Gly Gln Arg	260	265	270
Cys Glu Asn Leu Leu Glu Glu Arg Asn Cys Ser Asp Pro Gly Gly	275	280	285
Pro Val Asn Gly Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile	290	295	300
Asn Gly Arg His Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys	305	310	315
Asn Asn Ser Tyr Val Leu Ser Gly Asn Glu Lys Arg Thr Cys Gln	320	325	330
Gln Asn Gly Glu Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala	335	340	345
Cys Arg Glu Pro Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu	350	355	360
Pro Met Gln Val Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr	365	370	375
Ser Ala Ala Phe Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys	380	385	390
Lys Pro Ala Leu Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His	395	400	405
Leu His Thr Gln Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Arg	410	415	420
Arg Leu Gly Ser Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp	425	430	435
Ser Gly Arg Ala Pro Ser Cys Ile Pro Cys Gly Lys Ile Glu	440	445	450
Asn Ile Thr Ala Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln	455	460	465
Ala Ala Ile Tyr Arg Arg Thr Ser Gly Val His Asp Gly Ser Leu	470	475	480

His Lys Gly Ala	Trp Phe Leu Val Cys Ser Gly Ala Leu Val Asn	485	490	495
Glu Arg Thr Val	Val Val Ala Ala His Cys Val Thr Asp Leu Gly	500	505	510
Lys Val Thr Met	Ile Lys Thr Ala Asp Leu Lys Val Val Leu Gly	515	520	525
Lys Phe Tyr Arg	Asp Asp Asp Arg Asp Glu Lys Thr Ile Gln Ser	530	535	540
Leu Gln Ile Ser	Ala Ile Ile Leu His Pro Asn Tyr Asp Pro Ile	545	550	555
Leu Leu Asp Ala	Asp Ile Ala Ile Leu Lys Leu Leu Asp Lys Ala	560	565	570
Arg Ile Ser Thr	Arg Val Gln Pro Ile Cys Leu Ala Ala Ser Arg	575	580	585
Asp Leu Ser Thr	Ser Phe Gln Glu Ser His Ile Thr Val Ala Gly	590	595	600
Trp Asn Val Leu	Ala Asp Val Arg Ser Pro Gly Phe Lys Asn Asp	605	610	615
Thr Leu Arg Ser	Gly Val Val Ser Val Val Asp Ser Leu Leu Cys	620	625	630
Glu Glu Gln His	Glu Asp His Gly Ile Pro Val Ser Val Thr Asp	635	640	645
Asn Met Phe Cys	Ala Ser Trp Glu Pro Thr Ala Pro Ser Asp Ile	650	655	660
Cys Thr Ala Glu	Thr Gly Gly Ile Ala Ala Val Ser Phe Pro Gly	665	670	675
Arg Ala Ser Pro	Glu Pro Arg Trp His Leu Met Gly Leu Val Ser	680	685	690
Trp Ser Tyr Asp	Lys Thr Cys Ser His Arg Leu Ser Thr Ala Phe	695	700	705
Thr Lys Val Leu	Pro Phe Lys Asp Trp Ile Glu Arg Asn Met Lys	710	715	720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 233  
tgtcaaggac gcaactgccgt catg 24

<210> 234  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 234  
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gtcctatcc 50

<210> 235  
<211> 1964  
<212> DNA  
<213> Homo sapiens

<400> 235  
accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50  
agctcaactt gaagctttct tgcctgcagt gaagcagaga gatagatatt 100  
attcagctaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150  
caaattccga ttactgttgc tgttgacttt gtgcctgaca gtggttgggt 200  
gggccaccag taactacttc gtgggtgcc a ttcaagagat tccataaagca 250  
aaggagtcca ttgctaattt ccataagacc ctcatcttgg ggaaggggaa 300  
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350  
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400  
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450  
ccggtatcgc cctcaggaat gtaaagcttt acagagggtc gccatcctcg 500  
ttccccaccg gaacagagag aaacacctga tgtacctgtc ggaacatctg 550  
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600  
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aagggtgaat gattctctaa caactactgg ggtatggggag gcgaagacga 900  
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tgctgaagt gggtaaatat acaatgggtc tccacactag agacaaaggc 1000

aatgaggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050  
 ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgttg 1100  
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 acagctcatt gttgagctga atttttcctt tttgtatttt cttgacagag 1300  
 ctctgtgtga tgtagagtat aaaacagttg taacaagaca gctttcttag 1350  
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 ttatataaaa ggatgactca aaggataaaa tgaacgctat ttgaggactc 1450  
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 tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900  
 acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950  
 gtgaaaaagc aaaa 1964

<210> 236  
 <211> 344  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> Signal peptide  
 <222> 1-27  
 <223> Signal peptide

<220>  
 <221> N-glycosylation sites  
 <222> 4-7, 220-223, 335-338  
 <223> N-glycosylation sites

<220>  
 <221> Xylose isomerase proteins  
 <222> 191-201  
 <223> Xylose isomerase proteins

<400> 236  
 Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu  
 1 5 10 15



Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	
				20					25					30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	
				35					40					45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	
				50					55					60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	
				65					70					75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	
				80					85					90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	
				95					100					105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	
				110					115					120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	
				125					130					135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	
				140					145					150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	
				155					160					165	
Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
				170					175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
				185					190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
				200					205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	
				215					220					225	
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	
				230					235					240	
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	
				245					250					255	
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln	
				260					265					270	
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	
				275					280					285	
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	
				290					295					300	
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	
				305					310					315	
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	
				320					325					330	

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala  
335 340

<210> 237  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 237  
octtaacctca gaggccagag caagc 25

<210> 238  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 238  
gagcttcacgc cgttctgcgt tcacc 25

<210> 239  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 239  
caggaatgta aagctttaca gagggctcgcc atcctcgttc cccacc 46

<210> 240  
<211> 2567  
<212> DNA  
<213> Homo sapiens

<400> 240  
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tctcccgctc cgggccccgc aatggcccag gcagtggtgt cgcgcctcgg 150  
ccgcacatcct tggttgctct gctcctgcgc ctggggccccg gcagggggtgg 200  
ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgcccaccag 250  
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cgtgtgtgtg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450  
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 gtggccacga cagcgtacaa cctgaccac accttcaggg accctgggga 1050  
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 accacaagat ccaggtgtgg cctccagaa tccagccgg tgtcttctgt 1150  
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 ctggagactc catctgagta cctggaaatt gttcgtgaga accacgggct 1350  
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 aaggtgtgac acatagatgg gcacactcac agagagaagt gtgcattgac 1900  
 acacaccaca cacacacaca cacacacaca cacagaaata taacacatg 1950  
 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtogggt 2000  
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 gccctgacag gttctgggcc cgggccctcc ctttgtgctt tgtctctgca 2100  
 gttctctgcg cctttataag gccatccatg tccctgctgg ctggcagggg 2150

cctggatggg gggcaggact aatactgagt gattgcagag tgctttataa 2200  
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 aaaaaaatc aaaaagttag ccgggcgtgg tgggtgggtg ctgtagtccc 2450  
 agctactcgg gaggctgagg caggagaatg gtgcgaaccc gggaggcgga 2500  
 gcttgcaagt agccagatg gcgccactgc actccagcct gaggacaga 2550  
 gcgagactct gtctcca 2567

<210> 241

<211> 423

<212> PRT

<213> Homo sapiens

<400> 241

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Ala	Cys	Leu	Leu	Pro	Trp	Ala	Pro	Ala	Gly	Val	Ala	Ala	Gly	Leu	30
				20					25						
Tyr	Glu	Leu	Asn	Leu	Thr	Thr	Asp	Ser	Pro	Ala	Thr	Thr	Gly	Ala	45
				35					40						
Val	Val	Thr	Ile	Ser	Ala	Ser	Leu	Val	Ala	Lys	Asp	Asn	Gly	Ser	60
				50					55						
Leu	Ala	Leu	Pro	Ala	Asp	Ala	His	Leu	Tyr	Arg	Phe	His	Trp	Ile	75
				65					70						
His	Thr	Pro	Leu	Val	Leu	Thr	Gly	Lys	Met	Glu	Lys	Gly	Leu	Ser	90
				80					85						
Ser	Thr	Ile	Arg	Val	Val	Gly	His	Val	Pro	Gly	Glu	Phe	Pro	Val	105
				95					100						
Ser	Val	Trp	Val	Thr	Ala	Ala	Asp	Cys	Trp	Met	Cys	Gln	Pro	Val	120
				110					115						
Ala	Arg	Gly	Phe	Val	Val	Leu	Pro	Ile	Trp	Glu	Phe	Leu	Val	Gly	135
				125					130						
Asp	Leu	Val	Val	Thr	Gln	Asn	Thr	Ser	Leu	Pro	Trp	Pro	Ser	Ser	150
				140					145						
Tyr	Leu	Thr	Lys	Thr	Val	Leu	Lys	Val	Ser	Phe	Leu	Leu	His	Asp	165
				155					160						
Pro	Ser	Asn	Phe	Leu	Lys	Thr	Ala	Leu	Phe	Leu	Tyr	Ser	Trp	Asp	180
				170					175						
Phe	Gly	Asp	Gly	Thr	Gln	Met	Val	Thr	Glu	Asp	Ser	Val	Val	Tyr	195
				185					190						

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val
				200					205					210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val
				215					220					225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu
				230					235					240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr
				245					250					255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro
				260					265					270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu
				275					280					285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn
				290					295					300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile
				305					310					315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile
				320					325					330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro
				335					340					345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met
				350					355					360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro
				365					370					375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly
				380					385					390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg
				395					400					405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr
				410					415					420

Tyr Thr Val

<210> 242

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 242

catttcctta ccctggaccc agctcc 26

<210> 243

<211> 25

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 243  
gaaaggccca cagcacatct ggcag 25

<210> 244  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 244  
ccacgaccgc agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245  
<211> 485  
<212> DNA  
<213> Homo sapiens

<400> 245  
gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50  
gctcccagat ctgggccgct tgcctcctgc tctcctcct cctgccagc 100  
ctgaccagt gctctgtttt cccacaacag acgggacaac ttgcagagct 150  
gcaaccccg gacagagctg gagccaggcg cagctggatg cccatgttcc 200  
agaggcgaag gaggcgagac acccacttcc ccatctgcat tttctgctgc 250  
ggctgtgtgc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300  
acctgcctg ccccgctccc ctcccttctc tatttattcc tgetgcccc 350  
gaacataggt cttggaataa aatggctggt tctttgtttt tccaaaaaaa 400  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 485

<210> 246  
<211> 84  
<212> PRT  
<213> Homo sapiens

<400> 246  
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu  
1 5 10 15  
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln  
20 25  
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala  
35 40 45  
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Asp  
50 55 60  
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg  
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr

80

<210> 247

<211> 2359

<212> DNA

<213> Homo sapiens

<400> 247

ctgtcaggaa ggaccatctg aaggctgcaa tttgttctta gggaggcagg 50  
tgctggcctg gctggatct tccaccatgt tctgttgct gccttttgat 100  
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tttcaccct 150  
ccttctcggt ttcacatag tgccagccat ttttgagtc tcctttggta 200  
tccgcaaaact ctacatgaaa agtgtgttaa aaatctttgc gtgggctacc 250  
ttgagaatgg agcagaggagc caaggagaag aaccaccagc ttacaagcc 300  
ctacaccaac ggaatcattg caaaggatcc cacttacta gaagaagaga 350  
tcaaaagagt tcgtcgaagt ggtagtagta aggctctgga caacactcca 400  
gagttcgagc tctctgacat tttctacttt tgccgaaag gaatggagac 450  
cattatggat gatgaggatg caaagagatt ctccagagaa gaactggagt 500  
cctggaacct gctgagcaga accaattata acttccagta catcagcctt 550  
cggctcacgg tctctgtggg gttaggagtg ctgattcgggt actgctttct 600  
gctgccgctc aggatagcac tggctttcac agggattagc cttctgttg 650  
tgggcacaac tgtgttgga tacttgccaa atgggaggtt taaggaattc 700  
atgagtaaac atgttcactt aatgtgttac cggatctgog tgcagagcgt 750  
gacagccatc atcacctacc atgacaggga aaacagacca agaaatgggt 800  
gcactctgtg ggccaatcat acctaccga tcgatgtgat catcttggcc 850  
agcgatggct attatgcat ggtgggtcaa gtgcacgggg gactcatggg 900  
tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggtttgagc 950  
gctcggaagt gaaggatcgc cactgggtg ctaagagact gactgaacat 1000  
gtgcaagata aaagcaagct gcctatcttc atcttcccag aaggaaacct 1050  
catcaataat acatcggtga tgatgttcaa aaagggaagt ttgaaattg 1100  
gagccacagt ttacctgtt gctatcaagt atgacctca atttggcgat 1150  
gccttctgga acagcagcaa atacgggatg gtgacgtacc tgcgtcgaat 1200  
gatgaccagc tgggccattg tctgcagcgt gtggtacctg cctcccatga 1250  
ctagagaggc agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300  
gccattgcca ggcagggagg acttgtggac ctgctgtggg atgggggcct 1350

gaagaggag aaggtgaagg acacgttcaa ggaggagcag cagaagctgt 1400  
 acagcaagat gatcgtgggg aaccacaagg acaggagccg ctctcgagcc 1450  
 tgccctcagc tggctggggc caccgtgcgg ggtgccaacg ggctcagagc 1500  
 tggagtgcc gcgcgcgccc ccaactgctgt gtcctttcca gactccaggg 1550  
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 cgggatccct gtgcaccgg cgcagcctac ccttggtggt ctaaacggat 1650  
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 agtcgttga ggaatgcat taaagtgaac tccccacctt tgcacgctgt 1750  
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 cggtagaaga gtctgttatg caagcccggt tgccagggat gtgctggggg 1850  
 cgccaccgg ctctccagga aaggcacagc tgaggcactg tggctgggct 1900  
 cgccctcaac atgcgcccca gccttgagc tctgcagaca tgataggaag 1950  
 gaaactgtca tctgcagggg ctttcagcaa aatgaagggt tagattttta 2000  
 tgctgtgct gatggggtta ctaaaggag gggaagaggc caggtggggc 2050  
 gctgactgg ccattggggag aacgtgtgtt cgtactccag gctaaccctg 2100  
 aactccccat gtgatgcgcg ctttgttgaa tgtgtgtctc ggtttcccca 2150  
 tctgtaatat gagtcggggg gaatggtggt gattcctacc tcacagggct 2200  
 gttgtgggga ttaaagtgtc gcgggtgagt gaaggacaca tcacgttcag 2250  
 tgtttcaagt acaggccac aaaacggggc acggcaggcc tgagctcaga 2300  
 gctgctgcac tgggctttgg atttgttctt gtgagtaaat aaaactggct 2350  
 ggtgaatga 2359

<210> 248  
 <211> 456  
 <212> PRT  
 <213> Homo sapiens

<400> 248  
 Met Phe Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu  
 1 5 10 15  
 Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile  
 20 25 30  
 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu  
 35 40 45  
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg  
 50 55 60  
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro  
 65 70 75



Tyr Thr Asn Gly	Ile Ile Ala Lys Asp	Pro Thr Ser Leu Glu	Glu
80	85	90	
Glu Ile Lys Glu	Ile Arg Arg Ser Gly	Ser Ser Lys Ala Leu	Asp
95	100	105	
Asn Thr Pro Glu	Phe Glu Leu Ser Asp	Ile Phe Tyr Phe Cys	Arg
110	115	120	
Lys Gly Met Glu	Thr Ile Met Asp Asp	Glu Val Thr Lys Arg	Phe
125	130	135	
Ser Ala Glu Glu	Leu Glu Ser Trp Asn	Leu Leu Ser Arg Thr	Asn
140	145	150	
Tyr Asn Phe Gln	Tyr Ile Ser Leu Arg	Leu Thr Val Leu Trp	Gly
155	160	165	
Leu Gly Val Leu	Ile Arg Tyr Cys Phe	Leu Leu Pro Leu Arg	Ile
170	175	180	
Ala Leu Ala Phe	Thr Gly Ile Ser Leu	Leu Val Val Gly Thr	Thr
185	190	195	
Val Val Gly Tyr	Leu Pro Asn Gly Arg	Phe Lys Glu Phe Met	Ser
200	205	210	
Lys His Val His	Leu Met Cys Tyr Arg	Ile Cys Val Arg Ala	Leu
215	220	225	
Thr Ala Ile Ile	Thr Tyr His Asp Arg	Glu Asn Arg Pro Arg	Asn
230	235	240	
Gly Gly Ile Cys	Val Ala Asn His Thr	Ser Pro Ile Asp Val	Ile
245	250	255	
Ile Leu Ala Ser	Asp Gly Tyr Tyr Ala	Met Val Gly Gln Val	His
260	265	270	
Gly Gly Leu Met	Gly Val Ile Gln Arg	Ala Met Val Lys Ala	Cys
275	280	285	
Pro His Val Trp	Phe Glu Arg Ser Glu	Val Lys Asp Arg His	Leu
290	295	300	
Val Ala Lys Arg	Leu Thr Glu His Val	Gln Asp Lys Ser Lys	Leu
305	310	315	
Pro Ile Leu Ile	Phe Pro Glu Gly Thr	Cys Ile Asn Asn Thr	Ser
320	325	330	
Val Met Met Phe	Lys Lys Gly Ser Phe	Glu Ile Gly Ala Thr	Val
335	340	345	
Tyr Pro Val Ala	Ile Lys Tyr Asp Pro	Gln Phe Gly Asp Ala	Phe
350	355	360	
Trp Asn Ser Ser	Lys Tyr Gly Met Val	Thr Tyr Leu Leu Arg	Met
365	370	375	
Met Thr Ser Trp	Ala Ile Val Cys Ser	Val Trp Tyr Leu Pro	Pro
380	385	390	

Met Thr Arg Glu Ala Asp Glu Asp Ala Val Gln Phe Ala Asn Arg  
395 405

Val Lys Ser Ala Ile Ala Arg Gln Gly Gly Leu Val Asp Leu Leu  
410 415 420

Trp Asp Gly Gly Leu Lys Arg Glu Lys Val Lys Asp Thr Phe Lys  
425 430 435

Glu Glu Gln Gln Lys Leu Tyr Ser Lys Met Ile Val Gly Asn His  
440 445 450

Lys Asp Arg Ser Arg Ser  
455

<210> 249

<211> 1103

<212> DNA

<213> Homo sapiens

<400> 249

gccccctcgaa accaggactc cagcacctct ggtccccgcc tcaccggagc 50

ccctggccct cactctctct ccaggatggc cgctggcggc ttgatgatc 100

gccctcgga gcctcgccct ccacacctgg caggccaggc ctgttccacc 150

catcctgcc ctgggccttg ctccagacac ctttgacgat acctatgtg 200

gttgtgcga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250

atggccacc atgccctgct gcgggaatcc tgggaggcag ccaggagac 300

ctgggaggac aagcgtcgag ggcttacctt gccccctggc tcaaaagccc 350

agaatggaat agccattatg gtctacacca actcatcgaa caccctgtac 400

tgggagttga atcaggccgt gcggacgggc ggaggctccc gggagctcta 450

catgaggcac ttcccttca aggccctgca tttctacctg atccgggcc 500

tgcagctgct gcgaggcagt gggggctgca gcaggggacc tggggagggt 550

gtgttccgag gtgtgggcag ccttcgcttt gaacccaaga ggctggggga 600

ctctgtccgc ttgggccagt ttgcctccag ctccctggat aaggcagtg 650

cccacagatt tggggagaag aggcggggct gtgtgtctgc gccagggggt 700

cagctagggt cacaatctga gggggcctcc tctctgcccc cctggaagac 750

tctgtctttg gccccctggag agttccagct ctgaggggtt gggccctgaa 800

agttcaacat ctgccactta ggagccctgg gaacgggtga ccttcatat 850

acgaaggagg ccctccagca gccttgagaa gcaagaacat ggttccggac 900

ccagccctag cagccttctc cccaaccagg atgttgccct ggggaggcca 950

cagcagggct gagggaactc tgctatgtga tggggacttc ctgggacaag 1000

caaggaaagt actgaggcag ccacttgatt gaacggtggt gcaatgtgga 1050

gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100

gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

Met Ala Leu Ala Ala Leu Met Ile Ala Leu Gly Ser Leu Gly Leu  
1 5 10 15

His Thr Trp Gln Ala Gln Ala Val Pro Thr Ile Leu Pro Leu Gly  
20 25 30

Leu Ala Pro Asp Thr Phe Asp Asp Thr Tyr Val Gly Cys Ala Glu  
35 40 45

Glu Met Glu Glu Lys Ala Ala Pro Leu Leu Lys Glu Glu Met Ala  
50 55 60

His His Ala Leu Leu Arg Glu Ser Trp Glu Ala Ala Gln Glu Thr  
65 70 75

Trp Glu Asp Lys Arg Arg Gly Leu Thr Leu Pro Pro Gly Phe Lys  
80 85 90

Ala Gln Asn Gly Ile Ala Ile Met Val Tyr Thr Asn Ser Ser Asn  
95 100 105

Thr Leu Tyr Trp Glu Leu Asn Gln Ala Val Arg Thr Gly Gly Gly  
110 115 120

Ser Arg Glu Leu Tyr Met Arg His Phe Pro Phe Lys Ala Leu His  
125 130 135

Phe Tyr Leu Ile Arg Ala Leu Gln Leu Leu Arg Gly Ser Gly Gly  
140 145 150

Cys Ser Arg Gly Pro Gly Glu Val Val Phe Arg Gly Val Gly Ser  
155 160 165

Leu Arg Phe Glu Pro Lys Arg Leu Gly Asp Ser Val Arg Leu Gly  
170 175 180

Gln Phe Ala Ser Ser Ser Leu Asp Lys Ala Val Ala His Arg Phe  
185 190 195

Gly Glu Lys Arg Arg Gly Cys Val Ser Ala Pro Gly Val Gln Leu  
200 205 210

Gly Ser Gln Ser Glu Gly Ala Ser Ser Leu Pro Pro Trp Lys Thr  
215 220 225

Leu Leu Leu Ala Pro Gly Glu Phe Gln Leu Ser Gly Val Gly Pro  
230 235 240

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 251

ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252

<211> 1076

<212> DNA

<213> Homo sapiens

<400> 252

gtggcttcac ttccagtggct gacttccaga gagcaatatg gctgggtccc 50

caacatgcct caccctcatc tatatccttt ggcagctcac agggctcagca 100

gocctctggac ccgtgaaaga gctggctgggt tccgttgggt gggccgtgac 150

tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200

tcaacacaca cctcttgtc accatacagc cagaaggggg cactatcata 250

gtgacccaaa atcgtaatat ggagagagta gacttcccag atggaggcta 300

ctccctgaag ctacgcaaac tgaagaagaa tgactcaggg atctactatg 350

tggggatata cagctcatca ctccagcagc cctccaccca ggagtagctg 400

ctgcactgtc acgagcacct gtcaaaagcct aaagtcacca tgggtctgca 450

gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcagtgaac 500

atggggaaga ggatgtgatt tatactgga aggcctggg gcaagcagcc 550

aatgagtcct ataattgggtc catcctcccc atctcctgga gatggggaga 600

aagtgatatg accttcatct gcgttgccag gaacctgtc agcagaaact 650

tctcaagccc catccttgcc aggaagctct gtgaaggtgc tgcgtgatgc 700

ccagattcct ccattggtcct cctgtgtctc ctgttggtgc cctcctgtct 750

cagtctcttt gtactggggc tatttctttg gttcttgaag agagagagac 800

aagaagagta cattgaagag aagaagagag tggacatttt tggggaact 850

cctaacatat gccccattc tggagagaac acagagtacg acacaatccc 900

tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950

ccactgtgga aataccgaaa aagatggaaa atccccatc actgctcagc 1000

atgccagaca cccaaggct atttgccatc gagaatgtta tctagacagc 1050

agtgcactcc cctaagtctc tgctca 1076

<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

1	5	10	15
Gln Leu Thr Gly	Ser Ala Ala Ser Gly	Pro Val Lys Glu Leu Val	20 25 30
Gly Ser Val Gly	Gly Ala Val Thr Phe	Pro Leu Lys Ser Lys Val	35 40 45
Lys Gln Val Asp	Ser Ile Val Trp Thr	Phe Asn Thr Thr Pro Leu	50 55 60
Val Thr Ile Gln	Pro Glu Gly Gly Thr	Ile Ile Val Thr Gln Asn	65 70 75
Arg Asn Arg Glu	Arg Val Asp Phe Pro	Asp Gly Gly Tyr Ser Leu	80 85 90
Lys Leu Ser Lys	Leu Lys Lys Asn Asp	Ser Gly Ile Tyr Tyr Val	95 100 105
Gly Ile Tyr Ser	Ser Ser Leu Gln Gln	Pro Ser Thr Gln Glu Tyr	110 115 120
Val Leu His Val	Tyr Glu His Leu Ser	Lys Pro Lys Val Thr Met	125 130 135
Gly Leu Gln Ser	Asn Lys Asn Gly Thr	Cys Val Thr Asn Leu Thr	140 145 150
Cys Cys Met Glu	His Gly Glu Glu Asp	Val Ile Tyr Thr Trp Lys	155 160 165
Ala Leu Gly Gln	Ala Ala Asn Glu Ser	His Asn Gly Ser Ile Leu	170 175 180
Pro Ile Ser Trp	Arg Trp Gly Glu Ser	Asp Met Thr Phe Ile Cys	185 190 195
Val Ala Arg Asn	Pro Val Ser Arg Asn	Phe Ser Ser Pro Ile Leu	200 205 210
Ala Arg Lys Leu	Cys Glu Gly Ala Ala	Asp Asp Pro Asp Ser Ser	215 220 225
Met Val Leu Leu	Cys Leu Leu Leu Val	Pro Leu Leu Leu Ser Leu	230 235 240
Phe Val Leu Gly	Leu Phe Leu Trp Phe	Leu Lys Arg Glu Arg Gln	245 250 255
Glu Glu Tyr Ile	Glu Glu Lys Lys Arg	Val Asp Ile Cys Arg Glu	260 265 270
Thr Pro Asn Ile	Cys Pro His Ser Gly	Glu Asn Thr Glu Tyr Asp	275 280 285
Thr Ile Pro His	Thr Asn Arg Thr Ile	Leu Lys Glu Asp Pro Ala	290 295 300
Asn Thr Val Tyr	Ser Thr Val Glu Ile	Pro Lys Lys Met Glu Asn	305 310 315
Pro His Ser Leu	Leu Thr Met Pro Asp	Thr Pro Arg Leu Phe Ala	

Tyr Glu Asn Val Ile  
335

<210> 254

<211> 1053

<212> DNA

<213> Homo sapiens

<400> 254

ctggttcccc aacatgcctc accctcatct atatcctttg gcagctcaca 50  
gggtcagcag cctctggacc cgtgaaagag ctggtcggtt ccgttgggtg 100  
ggccgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150  
tctggacctt caacacaacc cctcttgta ccatacagcc agaagggggc 200  
actatcatag tgacccaaaa tcgtaatagg gagagagtag acttcccaga 250  
tggaggctac tcctgaagc tcagcaaaact gaagaagaat gactcaggga 300  
tctactatgt ggggatatac agctcatcac tccagcagcc ctccaccocag 350  
gagtacgtgc tgcattgtcta cgagcacctg tcaaagccta aagtcacat 400  
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450  
gcattgaaca tggggaagag gatgtgattt atacctggaa ggcctgtggg 500  
caagcagcca atgagtccta taatgggtcc atcctcccca tctcctggag 550  
atggggagaa agtgatatga ctttcatctg cgttgccagg aacctgtca 600  
gcagaaactt ctcaagcccc atccttgcca ggaagctctg tgaagggtgc 650  
gctgatgacc cagattcctc catggctcct ctgtgtctcc tgttgggtgc 700  
cctcctgctc agtctctttg tactggggct atttctttgg tttctgaaga 750  
gagagagaca agaagagtac attgaagaga agaagagagt ggacatttgt 800  
cgggaaactc ctaacatatg cccccattct ggagagaaca cagagtacga 850  
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaataa 900  
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950  
ctgctcagca tgccagacac accaaggcta ttgcctatg agaattgtat 1000  
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050  
aaa 1053

<210> 255

<211> 860

<212> DNA

<213> Homo sapiens

<400> 255

gaaagacgtg gtcctgacag acagacaatc ctattcccta ccaaatgaa 50

gatgctgctg ctgctgtggt tgggactgac cctagctctgt gtccatgcag 100  
 aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150  
 gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200  
 acatggcaac tttagacttt ttctgggaca aatccatgtc ttggagaatt 250  
 ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300  
 tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350  
 tgatggatcc aatacattta ctatacctaa gacagactat gataactttc 400  
 ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450  
 gggctctatg gccgagaacc agatttgagt tcagacatca aggaaaggtt 500  
 tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550  
 tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600  
 gccctcagtg ttgagtgagc acttctcacc aggactccac catcatccct 650  
 tctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700  
 ctgtctcact gagaagtcca attccagctc atcaacatgt tacctaggat 750  
 acctcatcaa gaatcaaaga cttctttaa tttctctttg atacaccctt 800  
 gacaattttt catgaaatta ttctctctcc tgttcaataa atgattacco 850  
 ttgcacttaa 860

<210> 256

<211> 180

<212> PRT

<213> Homo sapiens

<400> 256

Met	Lys	Met	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Thr	Leu	Val	Cys	15
1				5				10						
Val	His	Ala	Glu	Glu	Ala	Ser	Ser	Thr	Gly	Arg	Asn	Phe	Asn	Val
			20						25					30
Glu	Lys	Ile	Asn	Gly	Glu	Trp	His	Thr	Ile	Leu	Ala	Ser	Asp	45
			35						40					
Lys	Arg	Glu	Lys	Ile	Glu	Glu	His	Gly	Asn	Phe	Arg	Leu	Phe	Leu
			50						55					60
Glu	Gln	Ile	His	Val	Leu	Glu	Asn	Ser	Leu	Val	Leu	Lys	Val	His
			65						70					75
Thr	Val	Arg	Asp	Glu	Glu	Cys	Ser	Glu	Leu	Ser	Met	Val	Ala	Asp
			80						85					90
Lys	Thr	Glu	Lys	Ala	Gly	Glu	Tyr	Ser	Val	Thr	Tyr	Asp	Gly	Phe
			95						100					105
Asn	Thr	Phe	Thr	Ile	Pro	Lys	Thr	Asp	Tyr	Asp	Asn	Phe	Leu	Met
			110						115					120

Ala	His	Leu	Ile	Asn	Glu	Lys	Asp	Gly	Glu	Thr	Phe	Gln	Leu	Met
				125					130					135
Gly	Leu	Tyr	Gly	Arg	Glu	Pro	Asp	Leu	Ser	Ser	Asp	Ile	Lys	Glu
				140					145					150
Arg	Phe	Ala	Gln	Leu	Cys	Glu	Glu	His	Gly	Ile	Leu	Arg	Glu	Asn
				155					160					165
Ile	Ile	Asp	Leu	Ser	Asn	Ala	Asn	Arg	Cys	Leu	Gln	Ala	Arg	Glu
				170					175					180

<210> 257

<211> 766

<212> DNA

<213> Homo sapiens

<400> 257

ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50  
gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100  
ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150  
tctcaaaaac ccattctcttg ctttgagtgg tggttccagc gaattatagg 200  
agcagggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250  
aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatatttc 300  
agtgtgatca cagtcatggt tgctctgtat tgcattgctga tatccatcca 350  
ggctctctta aaaggctctc tcatgtgtaa ttctccaagc aacagtaaatg 400  
ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450  
ttcaacttgc agtggttttt caatgactct tgtgcacctc ctactggttt 500  
caataaaacc accagtaacg acaccatggc gagtggctgg agagcatcta 550  
gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600  
gtatttttag gtctattgct tgttgggaatt ctggagggtcc tgtttgggct 650  
cagtcagata gtcacgggtt tccttggtctg tctgtgtgga gtctctaagc 700  
gaagaagtca aattgtgtag tttaatggga ataaaatgta agtatcagta 750  
gtttgaaaaa aaaaaa 766

<210> 258

<211> 229

<212> PRT

<213> Homo sapiens

<400> 258

Met	Thr	Cys	Cys	Glu	Gly	Trp	Thr	Ser	Cys	Asn	Gly	Phe	Ser	Leu
1					5					10				15
Leu	Val	Leu	Leu	Leu	Leu	Gly	Val	Val	Leu	Asn	Ala	Ile	Pro	Leu
					20				25					30
Ile	Val	Ser	Leu	Val	Glu	Glu	Asp	Gln	Phe	Ser	Gln	Asn	Pro	Ile



	35		40		45
Ser Cys Phe Glu	Trp Trp Phe Pro Gly	Ile Ile Gly Ala Gly	Leu		
	50		55		60
Met Ala Ile Pro	Ala Thr Thr Met Ser	Leu Thr Ala Arg Lys	Arg		
	65		70		75
Ala Cys Cys Asn	Asn Arg Thr Gly Met	Phe Leu Ser Ser Phe	Phe		
	80		85		90
Ser Val Ile Thr	Val Ile Gly Ala Leu	Tyr Cys Met Leu Ile	Ser		
	95		100		105
Ile Gln Ala Leu	Leu Lys Gly Pro Leu	Met Cys Asn Ser Pro	Ser		
	110		115		120
Asn Ser Asn Ala	Asn Cys Glu Phe Ser	Leu Lys Asn Ile Ser	Asp		
	125		130		135
Ile His Pro Glu	Ser Phe Asn Leu Gln	Trp Phe Phe Asn Asp	Ser		
	140		145		150
Cys Ala Pro Pro	Thr Gly Phe Asn Lys	Pro Thr Ser Asn Asp	Thr		
	155		160		165
Met Ala Ser Gly	Trp Arg Ala Ser Ser	Phe His Phe Asp Ser	Glu		
	170		175		180
Glu Asn Lys His	Arg Leu Ile His Phe	Ser Val Phe Leu Gly	Leu		
	185		190		195
Leu Leu Val Gly	Ile Leu Glu Val Leu	Phe Gly Leu Ser Gln	Ile		
	200		205		210
Val Ile Gly Phe	Leu Gly Cys Leu Cys	Gly Val Ser Lys Arg	Arg		
	215		220		225
Ser Gln Ile Val					

<210> 259

<211> 434

<212> DNA

<213> Homo sapiens

<400> 259

gtcgaatcca aatcactcat tgtgaaagct gagctcacag cogaataagc 50  
 caccatgagg ctgtcagtgt gtctcctgat ggtctcgtg gccctttgct 100  
 gctaccaggc ccattgctctt gtctgccag ctgttgcttc tgagatcaca 150  
 gtctctttat tcttaagtga cgctgcggtt aacctccaag ttgccaact 200  
 taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250  
 ccgatcagat atcttttaag aaacgactct cattgaaaaa gtctcgtgtg 300  
 aaatagttaa aaaatgttgt gtgtgacatg taaaaatgct caacctgttt 350  
 tccaaagtct ttcaacgaca cctgatctt cactaaaaat tgtaaaggtt 400

tcaacacgtt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met	Arg	Leu	Ser	Val	Cys	Leu	Leu	Met	Val	Ser	Leu	Ala	Leu	Cys
1				5					10					15

Cys	Tyr	Gln	Ala	His	Ala	Leu	Val	Cys	Pro	Ala	Val	Ala	Ser	Glu
				20					25					30

Ile	Thr	Val	Phe	Leu	Phe	Leu	Ser	Asp	Ala	Ala	Val	Asn	Leu	Gln
				35					40					45

Val	Ala	Lys	Leu	Asn	Pro	Pro	Pro	Glu	Ala	Leu	Ala	Ala	Lys	Leu
				50				55						60

Glu	Val	Lys	His	Cys	Thr	Asp	Gln	Ile	Ser	Phe	Lys	Lys	Arg	Leu
				65					70					75

Ser	Leu	Lys	Lys	Ser	Trp	Trp	Lys
				80			

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccgttctc tgcgctgccca gctcagggtga gccctcgcca aggtgacctc 50

gcaggacact ggtagaaggag cagtgaaggaa cctgcagagt cacacagttg 100

ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150

cgccccagtg cctctcccc tgcagccctg ccctcgaaac tgtgacatgg 200

agagagtgac cctggccctt ctctactgg caggcctgac tgccttggaa 250

gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300

aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350

ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400

cagcacagtc ctgtacctga gaaggccatc ccactcatca ctccaggtc 450

tgccactact tgctgagcac aggaactggcc tccagggatg gcttgaagcc 500

taaacactggc cccacagacc tctctccctg ggaggcctta tctcaagga 550

aggacttctc tccaagggca ggtgttagg cccctttctg atcaggaggc 600

ttctttatga attaaactcg ccccaccacc ccctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr  
1 5 10 15

Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe  
20 25 30

Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly  
35 40 45

Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys  
50 55 60

Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu  
65 70 75

Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys  
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgtcg 50

ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100

actcctgctg ctggttggg gtcctggtct actcgccgc atcctggctt 150

ggacctatgc cttctataac aactgccgcc ggctccagtg ttccacacag 200

ccccaaaaa ggaactgggt ttgggggtcac ctgggcctga tcaactctac 250

agaggagggg ttgaaggact cgaccacagat gtcggccacc tattccacag 300

gctttacggg atggctgggt cccatcatcc ccttcacgtg ttatgcccac 350

cctgacacca tccggtctat caccaatgcc tcagctgcca ttgacaccaa 400

ggataatctc ttcacaggt tccctgaagcc ctggtgggga gaagggatac 450

tgctgagtg cggtgacaag tggagccgcc accgtcggat gctgacgccc 500

gccttccatt tcaacatcct gaagtccatc ataacgatct tcaacaagag 550

tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600

gtcgtctgga catgtttgag cacatcagcc tcatgacott ggacagtcta 650

cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700

atatattgoc accatcttgg agctcagtcg cctttagtag aaaagaagcc 750

agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800

cggcgcttcc acagggcctg ccgcctgggt catgacttca cagacgtgt 850

catccgggag cggcgtcgca cctcccccac tcagggtatt gatgattttt 900

tcaaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000  
 agaggctgac accttcattg ttggaggcca tgacaccacg gccactggcc 1050  
 tctcctgggt cctgtacaac ctgctgaggc acccagaata ccaggagcgc 1100  
 tggcgacagg aggtgcaaga gcttctgaag gaccgcgctc ctaagagat 1150  
 tgaatgggac gacctggccc agctgccctt cctgacctg tgcgtgaagg 1200  
 agagcctgag gttacatccc ccagctccct tcctctccc atgtgcacc 1250  
 caggacattg ttctcccaga tggccgagtc atcccaaag gcattacctg 1300  
 cctcatcgat attatagggg tccatcaca ccaactgtg tggccggatc 1350  
 ctgaggctca cgaccccttc cgcttgacc cagagaacag caaggggagg 1400  
 tcacctctgg cttttattcc ttctccgca gggcccagga actgcatcgg 1450  
 gcaggcgctc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500  
 tgcacttcgg gttctcgcca gaccacactg agccccgcag gaagctggaa 1550  
 ttgatcatgc gcgccgaggg cgggctttgg ctgcgggtgg agccccgaa 1600  
 tgtaggcttg cagtgacttt ctgaccatc cacctgtttt tttgcagatt 1650  
 gtcataata aaacggtgct gtcaaa 1676

<210> 264

<211> 524

<212> PRT

<213> Homo sapiens

<400> 264

Met	Ser	Leu	Leu	Ser	Leu	Pro	Trp	Leu	Gly	Leu	Arg	Pro	Val	Ala
1				5					10					15
Met	Ser	Pro	Trp	Leu	Leu	Leu	Leu	Leu	Val	Val	Gly	Ser	Trp	Leu
				20					25					30
Leu	Ala	Arg	Ile	Leu	Ala	Trp	Thr	Tyr	Ala	Phe	Tyr	Asn	Asn	Cys
				35					40					45
Arg	Arg	Leu	Gln	Cys	Phe	Pro	Gln	Pro	Pro	Lys	Arg	Asn	Trp	Phe
				50					55					60
Trp	Gly	His	Leu	Gly	Leu	Ile	Thr	Pro	Thr	Glu	Glu	Gly	Leu	Lys
				65					70					75
Asp	Ser	Thr	Gln	Met	Ser	Ala	Thr	Tyr	Ser	Gln	Gly	Phe	Thr	Val
				80					85					90
Trp	Leu	Gly	Pro	Ile	Ile	Pro	Phe	Ile	Val	Leu	Cys	His	Pro	Asp
				95					100					105
Thr	Ile	Arg	Ser	Ile	Thr	Asn	Ala	Ser	Ala	Ala	Ile	Ala	Pro	Lys
				110					115					120
Asp	Asn	Leu	Phe	Ile	Arg	Phe	Leu	Lys	Pro	Trp	Leu	Gly	Glu	Gly
				125					130					135

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met	
				140					145					150	
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr	
				155					160					165	
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His	
				170					175					180	
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile	
				185					190					195	
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe	
				200					205					210	
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile	
				215					220					225	
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu	
				230					235					240	
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg	
				245					250					255	
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val	
				260					265					270	
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp	
				275					280					285	
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp	
				290					295					300	
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp	
				305					310					315	
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His	
				320					325					330	
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala	
				335					340					345	
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu	
				350					355					360	
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu	
				365					370					375	
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg	
				380					385					390	
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp	
				395					400					405	
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys	
				410					415					420	
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro	
				425					430					435	
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser	
				440					445					450	

Lys	Gly	Arg	Ser	Pro	Leu	Ala	Phe	Ile	Pro	Phe	Ser	Ala	Gly	Pro
				455					460					465
Arg	Asn	Cys	Ile	Gly	Gln	Ala	Phe	Ala	Met	Ala	Glu	Met	Lys	Val
				470					475					480
Val	Leu	Ala	Leu	Met	Leu	Leu	His	Phe	Arg	Phe	Leu	Pro	Asp	His
				485					490					495
Thr	Glu	Pro	Arg	Arg	Lys	Leu	Glu	Leu	Ile	Met	Arg	Ala	Glu	Gly
				500					505					510
Gly	Leu	Trp	Leu	Arg	Val	Glu	Pro	Leu	Asn	Val	Gly	Leu	Gln	
				515					520					

<210> 265  
 <211> 584  
 <212> DNA  
 <213> Homo sapiens

<400> 265  
 caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50  
 ctggcctctc gctgttttgc tttcacagga ttcttaaadc ctctcttctc 100  
 tcttctctctc cttgactcca gggaaatadc ctttcaatc tcagcacctc 150  
 atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200  
 cagatattgc cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250  
 agcagactca agtaccacaa tttttaacc cagaggaaat ttgagaaagt 300  
 ttcaggattt ctctggacaa gatcctaaca ttttactgag tcattctttg 350  
 gccagaatct ggaaaccata caagaaacgt gagactcctg attgctttct 400  
 gaaatactgt gtctgaagt aaataagcat ctgttagtca gtcagaaac 450  
 acccatctta gaatatgaaa aataacacaa tgcttgattt gaaacacgt 500  
 tggagaaaaa ctaggcaaac tacacctgt tcattgttac ctggaaaata 550  
 aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 266  
 Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu  
 1 5 10 15  
 Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser  
 20 25 30  
 Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu  
 35 40 45  
 Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu  
 50 55 60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr  
65 70  
Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe  
80 85 90  
Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg  
95 100 105  
Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp  
110 115 120  
Lys Tyr Cys Val

<210> 267  
<211> 654  
<212> DNA  
<213> Homo sapiens

<400> 267  
gaacattttt agttcccaag gaatgtacat cagccccacg gaagctaggc 50  
cacctctggg atgggggtgc tgggtttaaa caaacgccag tcattctata 100  
taaggacctg acagccacca ggcaccacct ccgccaggaa ctgcaggccc 150  
acctgtctcg aaccagctg aggccatgcc ctccccaggy accgtctgca 200  
gctctctgct cctcggcatg ctctggctgg acttggcoat ggcaggctcc 250  
agcttctcta gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300  
gaagccacca gccaaagtgc agccccgagc tctagcaggc tggctccgcc 350  
cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400  
ttcaacgccc cttttgatgt tggaatcaag ctgtcagggg ttcagtacca 450  
gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctggggaag 500  
aggccaaaga ggccccagcc gacaagtgat cgcccacaag ccttactcac 550  
ctctctctaa gtttagaagc gctcatctgg cttttcgctt gcttctgcag 600  
caactccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650  
tgta 654

<210> 268  
<211> 117  
<212> PRT  
<213> Homo sapiens

<400> 268  
Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Leu Gly Met  
1 5 10 15  
Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro  
20 25 30  
Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro  
35 40 45

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269

<211> 1332

<212> DNA

<213> Homo sapiens

<400> 269

cggccacagc tggcatgctc tgccatgatcg ccacccctgct gtatgtcctc 50

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agaatatgaa cactgtggctg ctgttccctcc cctgttccc ggtgcagggtg 150

cagaccctga tagtcgtgat catcgggatg ctctgtctcc tgctggactt 200

tcttggtctg gtgcacctgg gccagctgct catcttccac atctacctga 250

gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300

gctgctcacc ttacacctct acttgagtat gtccttaacc ctgagcccc 350

cacgctctgg gccagagtct ttgtcccccg tgtgcgatg tgttcagggt 400

cagcctctcc cagaagtggc atcatggaca aaaagggcaa atcacaggaa 450

gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500

gccgagacct gcaggagtgg tgccaggctc ttgaagtaac aagtttaaaa 550

tggttcagaga caatggaatg gaattctatta ggcaagaaca ggacattatg 600

aaataaggac aggtggactt ccaaaaacac aagtagaaat tctaacaatg 650

aaatatatta caggcagctc acccactaac caaacaactg aagcgagagc 700

tgtggtcttg cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750

gttgctgaac gacggagggt aaactcccca gccccaagaa aactctgtgt 800

ggaagtaaca acaacctccc tgctctctgc accagccgtt ttggtcatgg 850

tgggccagct gcaaagcgtc ttccattctc tgggcagtg tggccccgag 900

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<210> 270

<211> 142

<212> PRT

<213> Homo sapiens

<400> 270

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				20				25					30	
Asp	Phe	Leu	Gly	Leu	Val	His	Leu	Gly	Gln	Leu	Leu	Ile	Phe	His
				35				40					45	
Ile	Tyr	Leu	Ser	Met	Ser	Pro	Thr	Leu	Ser	Pro	Arg	Ser	Pro	Gln
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Gly	Trp	Val	Val	Arg	Ala	Ala	His	Leu	Thr	Pro	Leu	Leu	Glu	Tyr
				65				70					75	
Val	Pro	Asn	Pro	Glu	Pro	Pro	Thr	Pro	Gly	Ala	Arg	Val	Phe	Val
				80				85					90	
Pro	Arg	Val	Arg	Met	Cys	Ser	Gly	Ser	Ala	Ser	Pro	Arg	Ser	Glu
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Ile	Met	Asp	Lys	Lys	Gly	Lys	Ser	Gln	Glu	Glu	Ile	Lys	Ser	Met
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Arg	Thr	Gln	Gln	Ala	Gln	Gln	Glu	Ala	Glu	Leu	Thr	Pro	Arg	Pro
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<210> 271

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 271

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<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

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				20						25				30

Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Trp	Phe	Val	Gly	Thr	Gln	Lys	Val
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	65	70	75
Val Val Gln Tyr	Asn Trp Glu Thr Gly	Asp Asp Arg Phe	Ser Phe
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Arg Ser Phe Arg	Ser Gly Met Trp Leu	Ser Cys Glu Glu Thr	Val
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Glu Glu Pro Gly	Glu Arg Cys Arg Ser	Phe Ile Glu Leu Thr	Pro
	110	115	120
Pro Ala Lys Arg	Gly Glu Lys Gly Leu	Leu Glu Phe Ala Thr	Leu
	125	130	135
Gln Gly Pro Cys	His Pro Thr Leu Arg	Phe Gly Gly Lys Arg	Leu
	140	145	150
Met Glu Lys Ala	Ser Leu Pro Ser Pro	Pro Leu Gly Leu Cys	Gly
	155	160	165
Lys Asn Pro Met	Val Ile Pro Gly Asn	Ala Asp His Leu His	Arg
	170	175	180
Thr Ser Ile His	Gln Leu Pro Pro Ala	Thr Asn Arg Leu Ala	Thr
	185	190	195
His Trp Glu Pro	Cys Leu Trp Ala Gln	Thr Glu Arg Leu Cys	Cys
	200	205	210
Cys Phe Leu Cys	Pro Val Arg Ser Pro	Gly Asp Gly Gly Pro	His
	215	220	225
Asp Val Phe Thr	Ser Leu Pro Ser Asp	Cys Gln Leu Gly Ser	Arg
	230	235	240
Arg Leu Glu Thr	Thr Cys Leu Glu Leu	Trp Leu Gly Leu Leu	His
	245	250	255
Gly Leu Ala Leu	Leu His Leu Leu His	Gly Val Gly Cys His	His
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Leu Gln His Val	His Gln Asp Gly Ala	Gly Val Gln Val Gln	Ala
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<210> 273

<211> 1158

<212> DNA

<213> Homo sapiens

<400> 273

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<210> 274

<211> 86

<212> PRT

<213> Homo sapiens

<400> 274

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 35 40 45  
 Arg Thr Thr Tyr Val Met Asp Val Ser Thr Asn Gln Gly Ser Gly  
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<211> 2694  
<212> DNA  
<213> Homo sapiens

<400> 275  
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<210> 276

<211> 131

<212> PRT

<213> Homo sapiens

<400> 276

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			20						25				30	
Asn	Lys	Tyr	Trp	Pro	Leu	Phe	Val	Leu	Phe	Phe	Tyr	Ile	Leu	Ser

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Pro Ile Pro Tyr	Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp				
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Ala Met Ser Asn Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr Thr					
	65		70		75
Gly Ile Val Val Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg					
	80		85		90
Ala His Leu Ile Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly					
	95		100		105
Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe					
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<210> 277

<211> 4104

<212> DNA

<213> Homo sapiens

<400> 277

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<210> 278  
 <211> 522  
 <212> PRT  
 <213> Homo sapiens

<400> 278

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Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln
				20					25					30
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys
				35					40					45
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala
				50					55					60
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn
				65					70					75
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln
				80					85					90
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln
				95					100					105
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu
				110					115					120
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro
				125					130					135
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln
				140					145					150
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr
				155					160					165
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile
				170					175					180
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn
				185					190					195
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys
				200					205					210
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn
				215					220					225
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu
				230					235					240
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val
				245					250					255
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr
				260					265					270
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu
				275					280					285

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu	290	295	300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu	305	310	315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser	320	325	330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro	335	340	345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe	350	355	360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu	365	370	375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser	380	385	390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr	395	400	405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu	410	415	420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu	425	430	435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp	440	445	450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val	455	460	465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met	470	475	480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn	485	490	495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys	500	505	510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val				515	520	

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

tccgtgcagg gggacgcctt tcagaaaactg cgccgagtta aggaac 46

<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280  
 gtgcaaggag ccgaggcgag atgggcgtcc tgggcgggt cctgctgtgg 50  
 ctgcagctct gcgactgac ccaggcggtc tccaaactct gggccccaa 100  
 cacggacttc gacgtcgag ccaactggag ccagaaccgg accccgtgcg 150  
 ccggcggcgc cgttgagttc ccggcggaca agatgggtgc agtcctgggt 200  
 caaagaagtc acgccgtctc agacatgctc ctgccgtggt atggggaact 250  
 cgtcctgggt tcaggagccg gattcggcgt ctgagacgtg ggctcgacc 300  
 tggactgtgg cggggcgaa cctgcgtct tccgcgactc tgaccgcttc 350  
 tcctggcatg acccgacact gtggcgtctc ggggacgagg cacctggcct 400  
 cttctctgtg gacgcgagc gcgtgcctg ccgccacgac gacgtcttct 450  
 ttcgcctag tgctccttc cgcgtggggc tcggccctgg cgttagcccc 500  
 gtgcgtgtcc gcagcatctc ggctctgggc cggacgttca cgcgcgacga 550  
 ggacctgggt gttttcctgg cgtcccgccg gggccgcta cgctccacg 600  
 ggcggggcgc gctgagcgtg ggccccgagg actgcgcgga ccctcgggc 650  
 tgcgtctgcg gcaacgcgga ggcgagccg tggatctgcg cggccctgct 700  
 ccagcccct 709

<210> 281

<211> 229

<212> PRT

<213> Homo sapiens

<400> 281

Met	Gly	Val	Leu	Gly	Arg	Val	Leu	Leu	Trp	Leu	Gln	Leu	Cys	Ala
1				5					10					15
Leu	Thr	Gln	Ala	Val	Ser	Lys	Leu	Trp	Val	Pro	Asn	Thr	Asp	Phe
				20					25					30
Asp	Val	Ala	Ala	Asn	Trp	Ser	Gln	Asn	Arg	Thr	Pro	Cys	Ala	Gly
				35					40					45
Gly	Ala	Val	Glu	Phe	Pro	Ala	Asp	Lys	Met	Val	Ser	Val	Leu	Val
				50					55					60
Gln	Glu	Gly	His	Ala	Val	Ser	Asp	Met	Leu	Leu	Pro	Leu	Asp	Gly
				65					70					75
Glu	Leu	Val	Leu	Ala	Ser	Gly	Ala	Gly	Phe	Gly	Val	Ser	Asp	Val
				80					85					90
Gly	Ser	His	Leu	Asp	Cys	Gly	Ala	Gly	Glu	Pro	Ala	Val	Phe	Arg
				95					100					105
Asp	Ser	Asp	Arg	Phe	Ser	Trp	His	Asp	Pro	His	Leu	Trp	Arg	Ser
				110					115					120
Gly	Asp	Glu	Ala	Pro	Gly	Leu	Phe	Phe	Val	Asp	Ala	Glu	Arg	Val
				125					130					135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe  
140 145  
Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser  
155 160 165  
Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala  
170 175 180  
Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro  
185 190 195  
Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly  
200 205 210  
Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala  
215 220 225  
Leu Leu Gln Pro

<210> 282  
<211> 644  
<212> DNA  
<213> Homo sapiens

<400> 282  
atcgcatcaa ttgggagtag catcttctctc atgggaccag tgaacagct 50  
gaagcgaatg tttagccta ctctgtttgat tgcaactatc atgtgtctgt 100  
tgtgttttgc acttaccctg tgtctgtcct ttgtgtggca taacaaggga 150  
cttgacactta tcttctgcat ttgcagtcct ttggcattga cgtggtacag 200  
cctttccttc ataccatttg caaggtagtc tgtgaagaag tgttttgccg 250  
tgtgtcttgc ataattcatg gccagtttta tgaagctttg gaaggcacta 300  
tggacagaag ctggtggaca gttttgtaac tatcttcgaa acctctgtct 350  
tacagacatg tgccttttat cttgcagcaa tgtgttgctt gtgattcgaa 400  
catttgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450  
cagtagacaa ggatgagaag tgggttctgt atcttgtgga gtggaatctt 500  
cctcatgtac ctgtttcctc tctggatgtt gtccactga attccatga 550  
atacaaacct attcagcaac agcaaaaaaa aaaaaaaaaa aaaaaaaaaa 600  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283  
<211> 77  
<212> PRT  
<213> Homo sapiens

<400> 283  
Met Gly Pro Val Lys Gln Leu Lys Arg Met Phe Glu Pro Thr Arg  
1 5 10 15  
Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

	20		25		30
Cys Ser Ala Phe	Trp Trp His Asn Lys	Gly Leu Ala Leu Ile Phe			
	35	40			
Cys Ile Leu Gln	Ser Leu Ala Leu Thr	Trp Tyr Ser Leu Ser Phe			
	50	55			
Ile Pro Phe Ala	Arg Asp Ala Val Lys	Lys Cys Phe Ala Val Cys			
	65	70			

Leu Ala

<210> 284  
 <211> 2623  
 <212> DNA  
 <213> Homo sapiens

<400> 284  
 ttgagcgag gtagctcct gcgcgttcg gggcggttc tccagtcacc 50  
 ctcccgccgt taccgcgggc gcgcccagg gagtctctc cagaccctcc 100  
 ctcccggttc tccaaactaa tacggactga acggatcgct gcgagggttg 150  
 gagagaaaat tagggggaga aaggacagag agagcaacta ccatccatag 200  
 ccagatagat tatcttacac tgaactgac aagtactttg aaaatgactt 250  
 cgaattttat ctgtgtgtcc ttcatacttg ctgcactgag tctttcaacc 300  
 accttttctc tccaactaga ccagcaaaag gttctactag tttcttttga 350  
 tggattccgt tgggattact tatataaagt tccaacgccc cattttcatt 400  
 atattatgaa atatggtgtt cactgaagc aagtacttaa tgtttttatt 450  
 acaaaaacct accctaacca ttatactttg gtaactggcc tctttgcaga 500  
 gaatcatggg attgttgcaa atgatattgt tgatcctatt cggaacaaat 550  
 cttctctctt ggatcacatg aatatattatg attccaagtt ttgggaagaa 600  
 gcgacacca tatggatcac aaaccagagg gcaggacata ctagtgggtgc 650  
 agccatgtgg ccggaacag atgtaaaaat acataagcgc tttcttactc 700  
 attacatgcc ttacaatgag tcagtttcat ttgaagatag agttgccaaa 750  
 attgttgaat ggtttacgtc aaaagagccc ataaatcttg gtctctctca 800  
 ttgggaagac cctgatgaca tgggccacca tttgggacct gacagtcocg 850  
 toatggggcc tgcatattca gatattgaca agaagttagg atatctcata 900  
 caaatgctga aaaaggcaaa gttgtggaac actctgaacc taatcatcac 950  
 aagtgatcat ggaatgacgc agtgccttga ggaagggtta atagaacttg 1000  
 accagtacct ggataaagac cactataccc tgattgatca atctccagta 1050  
 gcagccatct tgccaaaaga aggtaaattt gatgaagtct atgaagcact 1100

aactcacgct catcctaatac ttactgttta caaaaaagaa gacgttccag 1150  
aaaggtggca ttacaaatc aacagtcgaa ttcaaccaat catagcagtg 1200  
gctgatgaag ggtggcacat ttacagaat aagtcagatg actttctgtt 1250  
aggcaaccac ggttacgata atgcgttagc agatatgcat ccaatatttt 1300  
tagcccatgg tctgccttc agaaagaatt tctcaaaaga agccatgaac 1350  
tccacagatt tgtaccact actatgccac ctctcaata tcaatgccat 1400  
gccacacaat ggatcattct ggaatgtcca ggatctgctc aattcagcaa 1450  
tgccaagggt ggtcccttat acacagagta ctatactcct ccttggtagt 1500  
gttaaaccag cagaatatga ccaagagggg tcataccctt atttcatagg 1550  
ggtctctctt ggcagcatta tagtgattgt atttttga atttcatc 1600  
agcatttaat tcacagtcaa atacctgcct tacaagatat gcatgctgaa 1650  
atagctcaac cattattaca agcctaattg tactttgaag tggatttgca 1700  
tattgaagtg gagattccat aattatgtca gtgtttaaag gtttcaaatt 1750  
ctgggaacc agttccaac atctgcagaa accattaagc agttacatat 1800  
ttagggtata acacacacac acacacacac atacacacac acggacacaa 1850  
atacttacac ctgcaaagga ataaagatgt gagagtatgt ctccattgtt 1900  
cactgtagca tagggataga taagatcctg ctttatttgg acttggcgca 1950  
gataatgtat atatttagca actttgcact atgtaaagta ccttatatat 2000  
tgcaacttaa atttctctcc tgatgggtac ttttaattga aatgcacttt 2050  
atggacagtt atgtcttata acttgattga aaatgacaac tttttgcacc 2100  
catgtcacag aatacttggt acgcattgtt caaactgaag gaaatttcta 2150  
ataatccga ataataaaca tagaaatcta tctccataaa ttgagagaag 2200  
aagaaggtga taagtgttga aaattaaatg tgataacott tgaaccttga 2250  
attttggaga tgtattccca acagcagaat gcaactgtgg gcatttcttg 2300  
tcttatttct ttccagagaa cgtggttttc atttattttt cctcctaaag 2350  
agagtcaaat actgacagat tcgttctaaa tatattgttt ctgtcataaa 2400  
attattgtga tttctgatg agtcatatta ctgtgatttt cataataatg 2450  
aagacaccat gaataactt ttcttctata tagttcagca atggcctgaa 2500  
tagaagcaac caggcaccat ctcaagaatg ttttctcttg tttgtaatta 2550  
tttgctcctt tgaaaattaa atcactatta attacattaa aaatcaaatt 2600  
ggataaaaa aaaaaaaaa aaa 2623

<210> 285

<211> 477  
 <212> PRT  
 <213> Homo sapiens

<400> 285

Met	Thr	Ser	Lys	Phe	Ile	Leu	Val	Ser	Phe	Ile	Leu	Ala	Ala	Leu
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Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val
				20					25					30
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys
				35					40					45
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His
				50					55					60
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn
				65					70					75
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile
				80					85					90
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser
				95					100					105
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala
				110					115					120
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly
				125					130					135
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe
				140					145					150
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp
				155					160					165
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile
				170					175					180
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His
				185					190					195
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp
				200					205					210
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala
				215					220					225
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly
				230					235					240
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr
				245					250					255
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala
				260					265					270
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala
				275					280					285
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp



290	295	300
Val Pro Glu Arg	Trp His Tyr Lys Tyr	Asn Ser Arg Ile Gln Pro
305	310	315
Ile Ile Ala Val	Ala Asp Glu Gly Trp	His Ile Leu Gln Asn Lys
320	325	330
Ser Asp Asp Phe	Leu Leu Gly Asn His	Gly Tyr Asp Asn Ala Leu
335	340	345
Ala Asp Met His	Pro Ile Phe Leu Ala	His Gly Pro Ala Phe Arg
350	355	360
Lys Asn Phe Ser	Lys Glu Ala Met Asn	Ser Thr Asp Leu Tyr Pro
365	370	375
Leu Leu Cys His	Leu Leu Asn Ile Thr	Ala Met Pro His Asn Gly
380	385	390
Ser Phe Trp Asn	Val Gln Asp Leu Leu	Asn Ser Ala Met Pro Arg
395	400	405
Val Val Pro Tyr	Thr Gln Ser Thr Ile	Leu Leu Pro Gly Ser Val
410	415	420
Lys Pro Ala Glu	Tyr Asp Gln Glu Gly	Ser Tyr Pro Tyr Phe Ile
425	430	435
Gly Val Ser Leu	Gly Ser Ile Ile Val	Ile Val Phe Phe Val Ile
440	445	450
Phe Ile Lys His	Leu Ile His Ser Gln	Ile Pro Ala Leu Gln Asp
455	460	465
Met His Ala Glu	Ile Ala Gln Pro Leu	Gln Ala
470	475	

<210> 286

<211> 1337

<212> DNA

<213> Homo sapiens

<400> 286

ggatttttgt gatccgcgat tcgctcccac gggcgaggacc tttgtaactg 50  
 cgggaggccc aggacaggcc caccctgcgg ggcgggaggc agccggggtg 100  
 agggagggtga agaaaccaag acgcagagag gccaaagccc ttgccttggtg 150  
 tcacacagcc aaaggaggca gagccagaac tcacaaccag atccagaggc 200  
 aacaggggaca tggccacctg ggacgaaaag gcagtcaccc gcacgggcca 250  
 ggtggtctcc gctgagagga tgagcaagtt ctaaggcac ttcacggtcg 300  
 tgggagacga ctaccatgcc tgaacatca actacaagaa atgggagaat 350  
 gaagaggagg aggaggagga ggagcagcca ccaccacac cagtctcagg 400  
 cgaggaaggc agagctgcag cccctgacgt tgccctgcc cctggccccg 450  
 caccaggggc ccccttgac ttcaggggca tgttgaggaa actgttcagc 500

tcccacaggt ttcaggtcat catcatctgc ttggtggttc tggatgccct 550  
 cctgggtgctt gctgagctca tcttggacct gaagatcatc cagcccgaca 600  
 agaataacta tgctgccatg gtattccact acatgagcat caccatcttg 650  
 gtctttttta tgatggagat catcttttaa tttttgtct tccgcctgag 700  
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 cattcatcct ggacattgtc ctctgttcc aggagcacca gtttgaggct 800  
 ctgggctctg tgattctgct ccggctgtgg cgggtggccc ggatcatcaa 850  
 tgggattatc atctcagtta agacacgttc agaacggcaa ctcttaagg 900  
 taaaacagat gaatgtacaa ttggccgccca agattcaaca ccttgagttc 950  
 agctgctctg agaagccctt ggactgatga gtttgtgtga tcaacctgta 1000  
 aggagaagct ctctccggat ggctatggga atgaaagaat ccgacttcta 1050  
 ctctcacaca gccaccgtga aagtcttgga gtaaatgtg ctgtgtacag 1100  
 aagagagaga aggaagcagg ctggcatgtt cactgggctg gtgttacgac 1150  
 agagaacctg acagtcactg gccagttatc acttcagatt acaaatcaca 1200  
 cagagcatct gctgttttc aatcacaaaga gaacaaaacc aaaatctata 1250  
 aagatattct gaaaatatga cagaatttga caaataaaag cataaacgtg 1300  
 taaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaa 1337

<210> 287

<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

Met	Ala	Thr	Trp	Asp	Glu	Lys	Ala	Val	Thr	Arg	Arg	Ala	Lys	Val
1				5					10					15
Ala	Pro	Ala	Glu	Arg	Met	Ser	Lys	Phe	Leu	Arg	His	Phe	Thr	Val
			20						25					30
Val	Gly	Asp	Asp	Tyr	His	Ala	Trp	Asn	Ile	Asn	Tyr	Lys	Lys	Trp
			35						40					45
Glu	Asn	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gln	Pro	Pro	Pro	Thr	
			50					55						60
Pro	Val	Ser	Gly	Glu	Glu	Gly	Arg	Ala	Ala	Ala	Pro	Asp	Val	Ala
			65					70						75
Pro	Ala	Pro	Gly	Pro	Ala	Pro	Arg	Ala	Pro	Leu	Asp	Phe	Arg	Gly
			80					85						90
Met	Leu	Arg	Lys	Leu	Phe	Ser	Ser	His	Arg	Phe	Gln	Val	Ile	Ile
			95					100						105
Ile	Cys	Leu	Val	Val	Leu	Asp	Ala	Leu	Leu	Val	Leu	Ala	Glu	Leu
			110					115						120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala
				125					130					135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
				140					145					150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
				230					235					240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
				245					250					255

<210> 288

<211> 3334

<212> DNA

<213> Homo sapiens

<400> 288

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<210> 289

<211> 469

<212> PRT

<213> Homo sapiens

<400> 289

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Thr	Glu	Phe	Gln	Tyr	Phe	Glu	Ser	Lys	Gly	Leu	Pro	Ala	Glu	Leu
			20						25					30
Lys	Ser	Ile	Phe	Lys	Leu	Ser	Val	Phe	Ile	Pro	Ser	Gln	Glu	Phe
			35						40					45
Ser	Thr	Tyr	Arg	Gln	Trp	Lys	Gln	Lys	Ile	Val	Gln	Ala	Gly	Asp
			50						55					60
Lys	Asp	Leu	Asp	Gly	Gln	Leu	Asp	Phe	Glu	Glu	Phe	Val	His	Tyr
			65						70					75
Leu	Gln	Asp	His	Glu	Lys	Lys	Leu	Arg	Leu	Val	Phe	Lys	Ile	Leu
			80						85					90

Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	95	105
Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	110	120
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	125	135
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	140	150
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp	155	165
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu	170	180
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	185	195
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	200	210
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	215	225
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	230	240
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	245	255
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	260	270
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	275	285
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	290	300
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	305	315
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu	320	330
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Pro	Asn	Met	Leu	Gly		335	345
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu	350	360
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro	365	375
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys	380	390
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	395	405

Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser	
				410					415					420	
Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu	
				425					430					435	
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val	
				440					445					450	
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly	
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Val Gln Ser Arg

<210> 290

<211> 1658

<212> DNA

<213> Homo sapiens

<400> 290

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atttcaggga gacactccat cacagtcact actgtcgcct cagctgggaa 200

cattggggag gatggaatcc tgagctgcac ttttgaacct gacataaaac 250

tttctgatat cgtgatacaa tggctgaagg aaggtgtttt aggcttggtc 300

catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatgtt 350

cagaggccgg acagcagtgt ttgctgatca agttagattt ggcaatgcct 400

ctttgcggct gaaaaacgtg caactcacag atgctggcac ctacaaatgt 450

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cagctttgag ctgaactctg agaatgtgac catgaagggt gtgtctgtgc 700

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goggagtac ctacagctgc taaactcaaa ggcttctctg tgtgtctctt 850

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 aaaaaaaaa 1658

<210> 291  
 <211> 282  
 <212> PRT  
 <213> Homo sapiens

<400> 291  
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 20 25 30  
 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala  
 35 40 45  
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro  
 50 55 60  
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly  
 65 70 75  
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu  
 80 85 90  
 Ser Glu Gln Asp Glu Met Phe Arg Gly Thr Ala Val Phe Ala  
 95 100 105  
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val  
 110 115 120  
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser  
 125 130 135  
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe  
 140 145 150  
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr



155	160	165
Leu Arg Cys Glu Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val Val	
170	175	180
Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser Glu Val Ser		
185	190	195
Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met Lys Val		
200	205	210
Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser Cys		
215	220	225
Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val		
230	235	240
Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn		
245	250	255
Ser Lys Ala Ser Leu Cys Val Ser Ser Phe Phe Ala Ile Ser Trp		
260	265	270
Ala Leu Leu Pro Leu Ser Pro Tyr Leu Met Leu Lys		
275	280	

<210> 292  
 <211> 1484  
 <212> DNA  
 <213> Homo sapiens

<400> 292  
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 cagcagttgc tacaggagat gaagaccctc ttcttgaata ctgagtacct 200  
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<210> 293

<211> 180

<212> PRT

<213> Homo sapiens

<400> 293

Met	Ala	Ala	Ser	Leu	Gly	Gln	Val	Leu	Ala	Leu	Val	Leu	Val	Ala
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Ala	Leu	Trp	Gly	Gly	Thr	Gln	Pro	Leu	Leu	Lys	Arg	Ala	Ser	Ala
			20					25						30
Gly	Leu	Gln	Arg	Val	His	Glu	Pro	Thr	Trp	Ala	Gln	Gln	Leu	Leu
			35					40						45
Gln	Glu	Met	Lys	Thr	Leu	Phe	Leu	Asn	Thr	Glu	Tyr	Leu	Met	Pro
			50					55						60
Phe	Leu	Leu	Asn	Gln	Cys	Gly	Ser	Leu	Leu	Tyr	Tyr	Leu	Thr	Leu
			65					70						75
Ala	Ser	Thr	Asp	Leu	Thr	Leu	Ala	Val	Pro	Ile	Cys	Asn	Ser	Leu
			80					85						90
Ala	Ile	Ile	Phe	Thr	Leu	Ile	Val	Gly	Lys	Ala	Leu	Gly	Glu	Asp
			95					100						105
Ile	Gly	Gly	Lys	Arg	Lys	Leu	Asp	Tyr	Cys	Glu	Cys	Gly	Thr	Gln
			110					115						120
Leu	Cys	Gly	Ser	Arg	His	Thr	Cys	Val	Ser	Ser	Phe	Pro	Glu	Pro
			125					130						135
Ile	Ser	Pro	Glu	Trp	Val	Arg	Thr	Arg	Pro	Phe	Pro	Ile	Leu	Pro
			140					145						150

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro  
155 160 165

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp  
170 175 180

<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

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tcgaaaagat tccgcaataa aactttgccg gtgggaagta cctagtga 150  
cggcctaaga tgccacttct tctcatgtcc agggcttgag gccctgtggt 200  
ccccatcctt gggagaagtc agctccagca ccatgaaggg catcctcgtt 250  
gctggtatca ctgcagtgtc tgttgacgct gtagaatctc tgagctgcgt 300  
gcagtgtaat tcatgggaaa aatcctgtgt caacagcatt gacctgta 350  
gtccctcaca tgccaacacc agctgtatca gctcctcagc cagctcctct 400  
ctagagacac cagtcagatt ataccagaat atgttctgct cagcggagaa 450  
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aagaacactt tcattttgta agccagtgtc gccaggaaa ggaatgcagc 550  
aacaccagcg atgcccctga cctccocctg aagaacgtgt ccagcaacgc 600  
agagtgcctt gottgttatg aatctaattg aacttctgt cgtgggaagc 650  
cctggaaatg ctatgaagaa gaacagtgtg tctttctagt tgcagaactt 700  
aagaatgaca ttgagtctaa gactctctgt ctgaaaggct gttccaacgt 750  
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gagtcacttt tcgaaagttt gagtctgcaa atgtaaacag cttaaccccc 850  
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ctgccagcta agtgggagtc acaggtctcc aggcaatgcc gacagctgcc 1100  
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aaaaaaaaaa aaaa 1164

<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

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20 25 30  
Ser Cys Val Asn Ser Ile Ala Ser Glu Cys Pro Ser His Ala Asn  
35 40 45  
Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro  
50 55 60  
Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser  
65 70 75  
Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu  
80 85 90  
Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys  
95 100 105  
Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser  
110 115 120  
Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser  
125 130 135  
Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val  
140 145 150  
Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu  
155 160 165  
Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe  
170 175 180  
Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys  
185 190 195  
Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro  
200 205 210  
Thr Thr Ser His Asn Val Gly Ser Lys Ala Ser Leu Tyr Leu Leu  
215 220 225  
Ala Leu Ala Ser Leu Leu Leu Arg Gly Leu Leu Pro  
230 235

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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ccagcccat ggtcccgcc gccggcgcc tgctgtgggt cctgctgctg 150

aatctctgggtc cccggggcgc gggggcccaa ggcctgaccc agactccgac 200  
cgaatgcag cggttcagtt tacgtcttgg gggcccatg acccgagct 250  
accggagcag cggccggact ggtcttcccc ggaagacaag gataatccta 300  
gaggacgaga atgatccat ggcgcagcgc gaccgcctgg ctggaccagc 350  
ggctgccgag ctcttggcgc ccacggtgtc caccggcttt agcggctgt 400  
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<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

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Arg Ser Tyr Arg Ser Thr Ala Arg Thr Gly Leu Pro Arg Lys Thr  
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Arg Ile Ile Leu Glu Asp Glu Asn Asp Ala Met Ala Asp Ala Asp

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Ser Thr Gly Phe	Ser Arg Ser Ser Ala	Ile Asn Glu Glu Asp Gly	
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Ser Ser Glu Glu	Gly Val Val Ile Asn	Ala Gly Lys Asp Ser Thr	
	110	115	120
Ser Arg Glu Leu	Pro Ser Ala Thr Pro	Asn Thr Ala Gly Ser Ser	
	125	130	135
Ser Thr Arg Phe	Ile Ala Asn Ser Gln	Glu Pro Glu Ile Arg Leu	
	140	145	150
Thr Ser Ser Leu	Pro Arg Ser Pro Gly	Arg Ser Thr Glu Asp Leu	
	155	160	165
Pro Gly Ser Gln	Ala Thr Leu Ser Gln	Trp Ser Thr Pro Gly Ser	
	170	175	180
Thr Pro Ser Arg	Trp Pro Ser Pro Ser	Pro Thr Ala Met Pro Ser	
	185	190	195
Pro Glu Asp Leu	Arg Leu Val Leu Met	Pro Trp Gly Pro Trp His	
	200	205	210
Cys His Cys Lys	Ser Gly Thr Met Ser	Arg Ser Arg Ser Gly Lys	
	215	220	225
Leu His Gly Leu	Ser Gly Arg Leu Arg	Val Gly Ala Leu Ser Gln	
	230	235	240
Leu Arg Thr Glu	His Lys Pro Cys Thr	Tyr Gln Gln Cys Pro Cys	
	245	250	255
Asn Arg Leu Arg	Glu Glu Cys Pro Leu	Asp Thr Ser Leu Cys Thr	
	260	265	270
Asp Thr Asn Cys	Ala Ser Gln Ser Thr	Thr Ser Thr Arg Thr Thr	
	275	280	285
Thr Thr Pro Phe	Pro Thr Ile His Leu	Arg Ser Ser Pro Ser Leu	
	290	295	300
Pro Pro Ala Ser	Pro Cys Pro Ala Leu	Ala Phe Trp Lys Arg Val	
	305	310	315
Arg Ile Gly Leu	Glu Asp Ile Trp Asn	Ser Leu Ser Ser Val Phe	
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<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

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<210> 299

<211> 320

<212> PRT

<213> Homo sapiens

<400> 299

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Asp	Cys	Val	Leu	Gln	Cys	Glu	Glu	Gln	Asn	Cys	Ser	Gly	Gly	Ala
			35					40						45
Leu	Asn	His	Phe	Arg	Ser	Arg	Gln	Pro	Ile	Tyr	Met	Ser	Leu	Ala
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Gly	Trp	Thr	Cys	Arg	Asp	Asp	Cys	Lys	Tyr	Glu	Cys	Met	Trp	Val
			65					70						75



Thr	Val	Gly	Leu	Tyr	Leu	Gln	Glu	Gly	His	Lys	Val	Pro	Gln	Phe	
				80					85					90	
His	Gly	Lys	Trp	Pro	Phe	Ser	Arg	Phe	Leu	Phe	Phe	Gln	Glu	Pro	
				95					100					105	
Ala	Ser	Ala	Val	Ala	Ser	Phe	Leu	Asn	Gly	Leu	Ala	Ser	Leu	Val	
				110					115					120	
Met	Leu	Cys	Arg	Tyr	Arg	Thr	Phe	Val	Pro	Ala	Ser	Ser	Pro	Met	
				125					130					135	
Tyr	His	Thr	Cys	Val	Ala	Phe	Ala	Trp	Val	Ser	Leu	Asn	Ala	Trp	
				140					145					150	
Phe	Trp	Ser	Thr	Val	Phe	His	Thr	Arg	Asp	Thr	Asp	Leu	Thr	Glu	
				155					160					165	
Lys	Met	Asp	Tyr	Phe	Cys	Ala	Ser	Thr	Val	Ile	Leu	His	Ser	Ile	
				170					175					180	
Tyr	Leu	Cys	Cys	Val	Arg	Thr	Val	Gly	Leu	Gln	His	Pro	Ala	Val	
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Val	Ser	Ala	Phe	Arg	Ala	Leu	Leu	Leu	Leu	Met	Leu	Thr	Val	His	
				200					205					210	
Val	Ser	Tyr	Leu	Ser	Leu	Ile	Arg	Phe	Asp	Tyr	Gly	Tyr	Asn	Leu	
				215					220					225	
Val	Ala	Asn	Val	Ala	Ile	Gly	Leu	Val	Asn	Val	Val	Trp	Trp	Leu	
				230					235					240	
Ala	Trp	Cys	Leu	Trp	Asn	Gln	Arg	Arg	Leu	Pro	His	Val	Arg	Lys	
				245					250					255	
Cys	Val	Val	Val	Val	Leu	Leu	Leu	Gln	Gly	Leu	Ser	Leu	Leu	Glu	
				260					265					270	
Leu	Leu	Asp	Phe	Pro	Pro	Leu	Phe	Trp	Val	Leu	Asp	Ala	His	Ala	
				275					280					285	
Ile	Trp	His	Ile	Ser	Thr	Ile	Pro	Val	His	Val	Leu	Phe	Phe	Ser	
				290					295					300	
Phe	Leu	Glu	Asp	Asp	Ser	Leu	Tyr	Leu	Leu	Lys	Glu	Ser	Glu	Asp	
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Lys	Phe	Lys	Leu	Asp											
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<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

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<210> 301

<211> 461  
 <212> PRT  
 <213> Homo sapiens

<400> 301

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Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

290	295	300
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320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu Val Thr Glu Lys Met Phe		
335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln Glu Met Ser Pro Glu Lys		
350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu Leu Pro Gly Leu Trp Glu		
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Gln Gly Trp Cys Glu Ile Thr Ala His Leu Leu Ala Leu Pro Glu		
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln Thr Leu Gly Val Leu Leu		
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln Asp Pro Gln Leu Gly Arg		
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr Gln Val Leu Ala Ser Leu		
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Glu Leu Gln Asp Gly Glu Asp Glu Gly Tyr Phe Gln Glu Leu Leu		
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<210> 302

<211> 2136

<212> DNA

<213> Homo sapiens

<400> 302

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<210> 303  
 <211> 247  
 <212> PRT  
 <213> Homo sapiens

<400> 303

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Arg	Val	Ile	Ile	Leu	Val	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser	35	40	45	
Leu	Leu	Leu	Ala	Ser	Val	Val	Trp	Phe	Ile	Leu	Val	His	Val	Thr	50	55	60	
Asp	Arg	Ser	Asp	Ala	Arg	Leu	Gln	Tyr	Gly	Leu	Leu	Ile	Phe	Gly	65	70	75	
Ala	Ala	Val	Ser	Val	Leu	Leu	Gln	Glu	Val	Phe	Arg	Phe	Ala	Tyr	80	85	90	
Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Asp	Glu	Gly	Leu	Ala	Ser	Leu	Ser	95	100	105	
Glu	Asp	Gly	Arg	Ser	Pro	Ile	Ser	Ile	Arg	Gln	Met	Ala	Tyr	Val	110	115	120	
Ser	Gly	Leu	Ser	Phe	Gly	Ile	Ile	Ser	Gly	Val	Phe	Ser	Val	Ile	125	130	135	
Asn	Ile	Leu	Ala	Asp	Ala	Leu	Gly	Pro	Gly	Val	Val	Gly	Ile	His	140	145	150	
Gly	Asp	Ser	Pro	Tyr	Tyr	Phe	Leu	Thr	Ser	Ala	Phe	Leu	Thr	Ala	155	160	165	
Ala	Ile	Ile	Leu	Leu	His	Thr	Phe	Trp	Gly	Val	Val	Phe	Phe	Asp	170	175	180	
Ala	Cys	Glu	Arg	Arg	Arg	Tyr	Trp	Ala	Leu	Gly	Leu	Val	Val	Gly	185	190	195	
Ser	His	Leu	Leu	Thr	Ser	Gly	Leu	Thr	Phe	Leu	Asn	Pro	Trp	Tyr	200	205	210	
Glu	Ala	Ser	Leu	Leu	Pro	Ile	Tyr	Ala	Val	Thr	Val	Ser	Met	Gly	215	220	225	
Leu	Trp	Ala	Phe	Ile	Thr	Ala	Gly	Gly	Ser	Leu	Arg	Ser	Ile	Gln	230	235	240	
Arg	Ser	Leu	Leu	Cys	Lys	Asp	245											

<210> 304  
 <211> 240  
 <212> DNA  
 <213> Homo sapiens

<220>

<221> unsure  
<222> 108, 123, 126, 154, 198, 206, 217  
<223> unknown base

<400> 304  
aagctggttt aaggaagcag aggagggtta gattcgttga gtgaggacgg 50  
aagatcaacc catttccatt ccgccagatg gcctatgttt ctggtctctc 100  
ccttcggnat catcagtggt gnttntctg ttatcaatat tttggctgat 150  
gcanttgggc caggtgtggt tgggatccat ggagactcac cctattantt 200  
cctganttca gccttntga cagcagccat tatcctgctc 240

<210> 305  
<211> 378  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332  
<223> unknown base

<400> 305  
gaccgaccgt tcagatgccg ggttccagta cggttctctg atttttggtg 50  
ctgctgtntc tgtccttcta caggagggtg tccgctttgc ctantacaag 100  
ctgcctaaga aggcagatga ggggttagca tngctgagtg aggacggaag 150  
atcacccatt tccatccgcc agatggccta tgttntggt ntttccctcg 200  
gtatcatcag tgggtgtttn tctgttatca atattttggn tgatgcantt 250  
gggccagggtg tggttgggat ccatggagan tcacctatt aattcctgaa 300  
ttcagccttt ntgcagcag ccattatcct gntccatacc ttttggggag 350  
ttgtgttttt tgatgcctgt gagaggag 378

<210> 306  
<211> 655  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 1, 22, 129, 133, 184  
<223> unknown base

<400> 306  
ngttggagaa gtggcgcgga cnttcatttg gggtttcggt ttccccctt 50  
tccctttccc cggggtctgg ggtgacattg cacgggcccc tctgtgggtc 100  
gctgtgccac cccacgcgga ctccccagnt gngcgccct tccatttg 150  
ctgtcctggt caggccccca ccccccttc cacntgacca gccattgggg 200  
ctgcggtgtt tttcggctgc actttctgct cgttcggccc ggccttcgct 250

cttttcttga tcaactgtggc tggggacccg cttcgcgtta tcaatcctgt 300  
 cgcaggggca tttttctggc tggctcctcc tgcctcggcc tctgtggtct 350  
 ggttcacatt ggtccatgtg accgaccggc cagatgcccg gctccagtac 400  
 ggcctcctga tttttggtgc tgcgtgtctc gtcctcttac aggaggtgtt 450  
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag gggtagcat 500  
 cgcgtagtag ggacggaaga taccatctc ccatccgcc gatggcctat 550  
 gttttcggc tctccttcgg tatcatcagt ggtgtctctc ctgttatcaa 600  
 tattttggct gatgcacttg ggcaggtgt ggttgggatc catggagact 650  
 ccccc 655

<210> 307  
 <211> 650  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 52, 89, 128  
 <223> unknown base

<400> 307  
 gtaaaagaaa gtggccggac cttcattggg gtttcggttc cccctttcc 50  
 cnttccccg ggtctggggg tgacattgca ccgcgccct cgtggggtcg 100  
 cgttgccacc ccacgaggac tccccagntg gcgcgccct cccatttgc 150  
 tgtcctggc aggcaccac cccctttcc acctgaccag ccatgggggc 200  
 tgcggtgttt ttcgggctgc actttcgtc cgttcgggcc cggccttcg 250  
 gcttttcttg atcactgtgg ctggggaccc gcttcgcgtt atcatcctg 300  
 tcgcagggc attttctggt ctggtctccc tgcctcggc ctctgtggtc 350  
 tggttcatct tggccatgt gaccgaccg tcagatgcc ggtccagta 400  
 cggcctcctg attttggtg ctgctgtctc tgccttcta caggaggtgt 450  
 tccgctttg ctaactacaag ctgcttaaga aggcagatga ggggttagca 500  
 tcgctgagtg aggacggaag atcaccatc tccatccgc agatggccta 550  
 tgtttctggt ctctccttcg gtatcatcag tgggtcttc tctgttatca 600  
 atattttggc tgatgcactt gggccaggtg tgggtgggat ccatggagac 650

<210> 308  
 <211> 1570  
 <212> DNA  
 <213> Homo sapiens

<400> 308  
 gccccaggga gcagtgggtg gttataactc aggcccggtg ccagagccc 50



aggaggaggc agtggccagg aaggcacagg cctgagaagt ctgcggctga 100  
 gctggggagca aatccccac cccctacctg ggggacaggg caagtgagac 150  
 ctggtgaggg tggctcagca ggcagggaag gagagggtgc tgtgcgtcct 200  
 gcacccacat ctttctctgt cccctccttg cctgtcttg aggctgctag 250  
 actcctatct tetgaattct atagtgcctg ggtctcagcg cagtgcgat 300  
 ggtggcccg ccttgtggtt cctctctacc tggggaata aggtgcagcg 350  
 gccatggcta cagcaagacc cccctggatg tgggtgctct gtgctctgat 400  
 cacagccttg cttctggggg tcacagagca tgttctcgcc aacaatgatg 450  
 tttcctgtga ccacccctct aacaccgtgc cctctgggag caaccaggac 500  
 ctgggagctg gggccgggga agacgcccgg tcggtgaca gcacgagccg 550  
 catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600  
 cgctgttgct aaggcccaac cagctctact gggggcggt gttggtgcat 650  
 ccacagtgc tgctcagcgc cgccactgc aggaagaaag ttttcagagt 700  
 ccgtctcggc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750  
 tgttcagggg ggtaaaatcc atccccacc ctggctactc ccacctggc 800  
 cactctaacg acctcatgct catcaaactg aacagaagaa ttctgccacc 850  
 taaagtgtc agaccatca acgtctctc tcattgtccc tctgctggga 900  
 caaagtgtt ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950  
 ttccctaagg tcctccagtg cttgaatata agcgtgctaa gtcagaaaaa 1000  
 gtgcgaggat gcttaccga gacagataga tgacaccatg ttctgcgccg 1050  
 gtgacaaagc aggtagagac tcctgccagg gtgattctgg ggggcctgtg 1100  
 gtctgcaatg gctccctgca gggactcgtg tcctggggag attacccttg 1150  
 tgcccgccgc aacagaccgg gtgtctacac gaacctctgc aagttacca 1200  
 agtggtatcca ggaaccatc caggccaact cctgagtcac ccaggagctc 1250  
 agcacaccgg catcccccac tgctgcaggg acagccctga cactccttc 1300  
 agacctcat tccttcccag agatgttgag aatgttcac tcctcagccc 1350  
 ctgaccccat gtctcctgga ctcagggtct gcttcccca cattgggctg 1400  
 accgtgtctc tctagttgaa cctggggaac aatttccaaa actgtccagg 1450  
 gcggggggtg cgtctcaatc tcctggggc actttcatcc tcaagctcag 1500  
 ggcccatccc ttctctgag ctctgaccca aatttagtcc cagaataaaa 1550  
 ctgagaagtg gaaaaaaaa 1570

<210> 309

<211> 293  
 <212> PRT  
 <213> Homo sapiens

<400> 309

Met	Ala	Thr	Ala	Arg	Pro	Pro	Trp	Met	Trp	Val	Leu	Cys	Ala	Leu
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Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn
			20						25					30
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly
			35						40					45
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser
			50						55					60
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met
			65						70					75
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln
			80						85					90
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr
			95						100					105
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His
			110						115					120
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln
			125						130					135
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His
			140						145					150
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro
			155						160					165
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser
			170						175					180
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser
			185						190					195
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser
			200						205					210
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile
			215						220					225
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser
			230						235					240
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu
			245						250					255
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn
			260						265					270
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile
			275						280					285
Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser							

<210> 310  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 310  
 tcctgtgacc acccctctaa cacc 24

<210> 311  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 311  
 ctggaacatc tgctgcccag attc 24

<210> 312  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 312  
 gtccgatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50

<210> 313  
 <211> 3010  
 <212> DNA  
 <213> Homo sapiens

<400> 313  
 atggtcaacg accggtggaa gaccatgggc ggcgtgccc aacttgagga 50  
 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100  
 ccgtgctgct ggccctggct gtgctgctgg ctgtagctgt caccgggtgc 150  
 gtgctcttcc tgaaccacgc ccacgcgcgc ggcacggcgc cccacctgt 200  
 cgtcagcact ggggctgcca gcgccaacag cgcctggtc actgtggaaa 250  
 gggcggacag ctgcacctc agcatcctca ttgacccgcg ctgcccgcag 300  
 ctcaccgaca gcttcgcacg cctggagagc gccacggcct cggctgtgca 350  
 ggcgctgaca gacacccagg ccagaccagc gctggtgggc gaccaggagc 400  
 aggagctgct ggacacgctg gccgaccagc tgccccgct gctggccgcg 450  
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 caacaaggcc gaccttcaga gagcgctcgc ccggggaacc cgcccccg 700  
 gctgtgccac tggtccccg ccccgagact gtctggagct cctcctaagc 750  
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 gggagaggcc gtgtgacctg gctctctgtc ccagtgcac caggtcatcc 3000  
 acatgcgcag 3010

<210> 314  
 <211> 461  
 <212> PRT  
 <213> Homo sapiens

<400> 314  
 Met Val Asn Asp Arg Trp Lys Thr Met Gly Gly Ala Ala Gln Leu  
 1 5 10 15  
 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr  
 20 25 30  
 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val  
 35 40 45  
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro  
 50 55 60  
 Gly Thr Ala Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala  
 65 70 75  
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu  
 80 85 90  
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe  
 95 100 105

Ala Arg Leu Glu	Ser Ala Gln Ala Ser	Val Leu Gln Ala Leu	Thr
	110	115	120
Glu His Gln Ala	Gln Pro Arg Leu Val	Gly Asp Gln Glu Gln	Glu
	125	130	135
Leu Leu Asp Thr	Leu Ala Asp Gln Leu	Pro Arg Leu Leu Ala	Arg
	140	145	150
Ala Ser Glu Leu	Gln Thr Glu Cys Met	Gly Leu Arg Lys Gly	His
	155	160	165
Gly Thr Leu Gly	Gln Gly Leu Ser Ala	Leu Gln Ser Glu Gln	Gly
	170	175	180
Arg Leu Ile Gln	Leu Leu Ser Glu Ser	Gln Gly His Met Ala	His
	185	190	195
Leu Val Asn Ser	Val Ser Asp Ile Leu	Asp Ala Leu Gln Arg	Asp
	200	205	210
Arg Gly Leu Gly	Arg Pro Arg Asn Lys	Ala Asp Leu Gln Arg	Ala
	215	220	225
Pro Ala Arg Gly	Thr Arg Pro Arg Gly	Cys Ala Thr Gly Ser	Arg
	230	235	240
Pro Arg Asp Cys	Leu Asp Val Leu Leu	Ser Gly Gln Gln Asp	Asp
	245	250	255
Gly Val Tyr Ser	Val Phe Pro Thr His	Tyr Pro Ala Gly Phe	Gln
	260	265	270
Val Tyr Cys Asp	Met Arg Thr Asp Gly	Gly Gly Trp Thr Val	Phe
	275	280	285
Gln Arg Arg Glu	Asp Gly Ser Val Asn	Phe Phe Arg Gly Trp	Asp
	290	295	300
Ala Tyr Arg Asp	Gly Phe Gly Arg Leu	Thr Gly Glu His Trp	Leu
	305	310	315
Gly Leu Lys Arg	Ile His Ala Leu Thr	Thr Gln Ala Ala Tyr	Glu
	320	325	330
Leu His Val Asp	Leu Glu Asp Phe Glu	Asn Gly Thr Ala Tyr	Ala
	335	340	345
Arg Tyr Gly Ser	Phe Gly Val Gly Leu	Ser Val Asp Pro	Glu
	350	355	360
Glu Asp Gly Tyr	Pro Leu Thr Val Ala	Asp Tyr Ser Gly Thr	Ala
	365	370	375
Gly Asp Ser Leu	Leu Lys His Ser Gly	Met Arg Phe Thr Thr	Lys
	380	385	390
Asp Arg Asp Ser	Asp His Ser Glu Asn	Asn Cys Ala Ala Phe	Tyr
	395	400	405
Arg Gly Ala Trp	Trp Tyr Arg Asn Cys	His Thr Ser Asn Leu	Asn
	410	415	420

Gly	Gln	Tyr	Leu	Arg	Gly	Ala	His	Ala	Ser	Tyr	Ala	Asp	Gly	Val
				425					430					435
Glu	Trp	Ser	Ser	Trp	Thr	Gly	Trp	Gln	Tyr	Ser	Leu	Lys	Phe	Ser
				440					445					450
Glu	Met	Lys	Ile	Arg	Pro	Val	Arg	Glu	Asp	Arg				
				455				460						

<210> 315

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 315

cacacgtcca acctcaatgg gcag 24

<210> 316

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 316

gaccagcagg gccaaaggaca agg 23

<210> 317

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 317

gttctctgag atgaagatcc ggccgggtccg ggagtaccgc ttag 44

<210> 318

<211> 1841

<212> DNA

<213> Homo sapiens

<400> 318

gcagtcagag acttcccctg ccctcgtctg ggaaagaaca ttaggaatgc 50

cttttagtgc cttgcttct gaactagctc acagtagccc ggcggcccag 100

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ccaagtacag cagcagcagg gacatgtctg atgatgatgg ggacaccacc 200

atgagcctgc attctcaagc ctctgccaca actcggcacc cagagccccg 250

gcgacagag cacagggtct cctcttcaac gtggcgacca gtggccctga 300

ccctgtctgac tttgtgcttg gtgctgtctga tagggctggc agccctgggg 350

ctttttttt ttcagtacta ccagctctcc aatactggtc aagacacat 400

ttctcaaatg gaagaaagat taggaaatag gtcccaagag ttgcaatctc 450  
 ttcaagtcca gaataataag ctgtgagcaa gtctgcagca tgtggctgaa 500  
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 ttgtacagaa caatggaat ggcatggaga caattgtctac cagttctata 600  
 aagacagcaa aagttgggag gactgtaaat atttctgcct tagtgaaaaa 650  
 tctaccatgc tgaagataaa caaacaagaa gacctggaat ttgccgcgtc 700  
 tcagagctac tctgagtttt tctactctta ttggacaggg cttttgcgc 750  
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 gaactgttcc atattataat agatgtcacc agcccaagaa gcagagactg 850  
 tgtggccatc ctcaatggga tgactctctc aaaggactgc aaagaattga 900  
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 catgtccccc ctgaaacatt aggcgaaggt gactgattcg cctctgcaa 1000  
 ctacaaatag cagagtgcgc caggcggtgc caaagcaagg gctagtgtgag 1050  
 acattgggaa atggaacata atcaggaaag actatctctc tgactagtac 1100  
 aaaatgggtt ctctgttttc ctgttcagga tcaccagcat ttctgagctt 1150  
 gggtttatgc acgtatttaa cagtcaacag aagtcttatt tacatgccac 1200  
 caaccaacct cagaaaccca taatgtcatc tgccttcttg gcttagagat 1250  
 aacttttagc tctcttctt ctcaatgtct aatatcacct cctgttttcc 1300  
 atgtcttctc tacacttggt ggaataagaa actttttgaa gttagagaaa 1350  
 tacattgagg taacatcctt ttctctgaca gtoaagtgt ccatcagaaa 1400  
 ttggcagtc cttccagat tgtaccagca aatacacaag gaattctttt 1450  
 tgtttgttcc agttcatact agtcccttcc caatccatca gtaaagaccc 1500  
 catctgcctt gtccatgccg ttcccaaca gggatgtcac ttgatgtgag 1550  
 aatctcaaat ctcaatgcct tataagcatt ccttctgtg tccattaaga 1600  
 ctctgataat tgtctccct ccataggaat ttctccagg aaagaaatat 1650  
 atccccatc cgtttcata tcagaactac ogccccgat attccttca 1700  
 gagagattaa agaccagaaa aaagtgagcc tctcatctg cactgtaat 1750  
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<210> 319

<211> 280

<212> PRT

<213> Homo sapiens



<400> 319

Met	Gln	Ala	Lys	Tyr	Ser	Ser	Thr	Arg	Asp	Met	Leu	Asp	Asp	Asp	
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Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr	
				20					25					30	
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser	
				35					40					45	
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val	
				50					55					60	
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr	
				65					70					75	
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu	
				80					85					90	
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val	
				95					100					105	
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys	
				110					115					120	
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser	
				125					130					135	
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln	
				140					145					150	
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys	
				155					160					165	
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp	
				170					175					180	
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser	
				185					190					195	
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu	
				200					205					210	
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile	
				215					220					225	
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu	
				230					235					240	
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys	
				245					250					255	
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His	
				260					265					270	
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp						
				275					280						

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>  
 <221> unsure  
 <222> 59, 95, 149, 331, 364, 438, 446  
 <223> unknown base  
  
 <400> 320  
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 gggacatgnt ggatgatgat gggacacacc catgagcctg cattntcaag 100  
 cttttgccac aattcggcat ccagagcccc ggcgcacaga gcacagggnt 150  
 cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200  
 ggtgctgctg atagggtggt cagccctggg gcttttgttt ttctagtact 250  
 accagctctc caatactggt caagacacca ttctcaaat ggaagaaaga 300  
 tttaggaata cgtccaaga gttgcaattt nttcaagtcc agaataataa 350  
 gcttgcaaga agntgcagc atgtggctga aaaactctgt cgtgagctgt 400  
 ataacaaagc tggaggaact ttgaaggagg gcaaagtntc ctcatntact 450  
 atacacacac cacttccc 468

<210> 321  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 321  
 atgcaggcca agtacagcag cac 23

<210> 322  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 322  
 catgctgacg acttcctgca agc 23

<210> 323  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 323  
 ccacacagtc tctgcttctt ggg 23

<210> 324  
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<223> Synthetic oligonucleotide probe

<400> 324

atgctggatg atgatgggga caccaccatg agcctgcatt 40

<210> 325

<211> 2988

<212> DNA

<213> Homo sapiens

<400> 325

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gaggagagcg gcccccgcg ggggcccgag ccctccggat cggcccctc 150  
cccggtcccg cccctcgga gactcctctg gctgctctgg gggttcgccc 200  
gggcccggga ccgcgggtcc gggcgccatg cgggcacgc tgctgtgtgc 250  
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ccctgagcct gctcagcgtc acctgggtgg aggagccgtg cggcccaggc 350  
ccgcccacac ctggagactc tgagctgccc ccgcgcgga acaccaacgc 400  
ggcgcccgccg cccaactcgg tgcagcccg agcggagcgc gagaagcccg 450  
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tgaaccgtg ccgcatgcat gccatctccg gctggcaggc cttctttccc 2150  
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gctccctgcc tttaataaac tggccaagtg tggaaaaa 2988

<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

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Val	Ala	Val	Gly	Ile	Ser	Leu	Gly	Phe	Thr	Leu	Ser	Leu	Leu	Ser
				20					25					30
Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro
				35					40					45
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala	Arg
				50					55					60
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro	Gly
				65					70					75
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu	Pro
				80					85					90
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val	Arg
				95					100					105
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu	Leu
				110					115					120
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly	Val
				125					130					135
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val	Phe
				140					145					150
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala	Val
				155					160					165
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu	Ala
				170					175					180
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Asp	Phe	Asp	Trp	Phe
				185					190					195
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu	Ala
				200					205					210
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu	Tyr
				215					220					225
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro	Gly
				230					235					240
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met	Leu
				245					250					255
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp	Ile
				260					265					270

Val Ser Ala Arg	Pro Asp Glu Trp Leu Gly Arg Cys Ile Leu Asp	275	285
Ala Thr Gly Val	Gly Cys Thr Gly Asp His Glu Gly Val His Tyr	290	300
Ser His Leu Glu	Leu Ser Pro Gly Glu Pro Val Gln Glu Gly Asp	305	315
Pro His Phe Arg	Ser Ala Leu Thr Ala His Pro Val Arg Asp Pro	320	330
Val His Met Tyr	Gln Leu His Lys Ala Phe Ala Arg Ala Glu Leu	335	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu Leu Gln Trp Glu Ile Gln	350	360
Asn Thr Ser His	Leu Ala Val Asp Gly Asp Arg Ala Ala Ala Trp	365	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg Pro Ala Ser Arg Phe Glu	380	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu Gln His Ala Phe Ser Cys	395	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu Arg Gly Ala Asp Arg Ala	410	420
Asp Val Ala Asp	Val Leu Gly Thr Ala Leu Glu Glu Leu Asn Arg	425	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln Lys Gln Gln Leu Val Asn	440	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg Gly Met Glu Tyr Thr Leu	455	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro Gln Gly Gly Arg Arg Pro	470	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg Pro Leu Ser Arg Val Glu	485	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu Ala Ser Arg Leu Thr Val	500	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg Asp Leu Ala Pro Gly Phe	515	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu Glu Pro Gly Asp Ala Ala	530	540
Ala Ala Leu Thr	Leu Leu Leu Tyr Gln Pro Arg Gln Ala Gln	545	555
Arg Val Ala His	Ala Asp Val Phe Ala Pro Val Lys Ala His Val	560	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly Ala Arg Val Pro Trp Leu	575	585

Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp Leu	590	595	600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala Gly	605	610	615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg Met	620	625	630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe Gln	635	640	645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro Pro	650	655	660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala Ser	665	670	675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly Arg	680	685	690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser Leu	695	700	705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val Leu	710	715	720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln Thr	725	730	735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu Gln	740	745	750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met Leu	755	760	765
Leu Phe Glu Gln	Glu Gln Gly Asn Ser Thr		770	775	

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgatgttctg 20

<210> 329

<211> 20

<212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 329  
 atggctcagt gtgcagacag 20  
  
 <210> 330  
 <211> 24  
 <212> DNA  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 330  
 gcatgctgct ccgtgaagta gtcc 24  
  
 <210> 331  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 331  
 atgcatggga aagaaggcct gccc 24  
  
 <210> 332  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 332  
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 <210> 333  
 <211> 1095  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 333  
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 gctcccctag tggagaaaag gtagtagtat tagccaattc ggcaggggccc 150  
 gctttttaga agcttgattt cctttgaaga tgaaagacta gcggaagctc 200  
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 gccacgacaa ctggaggcaa agaggggttg tcaacgcccc gcctcattgg 400



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 gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500  
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 ctgcttcgac cccagcaaga tccagctgcc agaggatgag tgaccagttg 1000  
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<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

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Ala	Ala	Ala	Thr	Arg	Gly	Leu	Pro	Ala	Ala	Arg	Val	Arg	Trp	Glu
			20						25					30
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly
			35						40					45
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu
				50					55					60
Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly
				65					70					75
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val
				80					85					90
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Val	Leu	Gly	Ser	Thr	Phe
				95					100					105
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg
				110					115					120
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro
				125					130					135
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro
				140					145					150

Glu Asp Glu

<210> 335

<211> 442

<212> DNA

<213> Homo sapiens

<400> 335

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aggactgtgg tcgccccgtc cgtgtggcg ggaagcggc cccagaacc 150

gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgatg 200

agaagaaccc agactcccat ggttatgaca aggacccgt tttgacgtc 250

tggaaatcgc gacttgctt cttctttggc gtctccatca tcttggtct 300

tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgtg 350

cccgcgcga agctgagagg cttgtgaaat accgagaggc caatggcctt 400

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<210> 336

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 336

ctgagaccct gcagcaccat ctg 23

<210> 337

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 337

ggtgttctt gagccccact tagc 24

<210> 338

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 338

aatctagctt ctccaggact gtggtcgccc cgtccgctgt 40

<210> 339

<211> 2162

<212> DNA

<213> Homo sapiens

<400> 339

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tcatacccc gctgccttcc ggggacgtag cgcacatt ccagttccg 150  
acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacaggct 200  
ctttccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250  
tgcacctgtc attcacaaa ggccttttga ggaccgata ctgggggcca 300  
cccttctcgc agggcccatc aggtgcagag ctgtgggtct ggttccaaga 350  
caactgtcact gatgtggata aatcttggaa ggagctcagt aatgtcctct 400  
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<210> 340

<211> 574

<212> PRT

<213> Homo sapiens

<400> 340

Met	Pro	Leu	Ala	Leu	Leu	Val	Leu	Leu	Leu	Gly	Pro	Gly	Gly	1	5	10	15
Trp	Cys	Leu	Ala	Glu	Pro	Pro	Arg	Asp	Ser	Leu	Arg	Glu	Glu	20	25	30	35
Val	Ile	Thr	Pro	Leu	Pro	Ser	Gly	Asp	Val	Ala	Ala	Thr	Phe	40	45	50	55
Phe	Arg	Thr	Arg	Trp	Asp	Ser	Glu	Leu	Gln	Arg	Glu	Gly	Val	60	65	70	75
His	Tyr	Arg	Leu	Phe	Pro	Lys	Ala	Leu	Gly	Gln	Leu	Ile	Ser	80	85	90	95
Tyr	Ser	Leu	Arg	Glu	Leu	His	Leu	Ser	Phe	Thr	Gln	Gly	Phe	100	105	110	115
Ala	Glu	Leu	Trp	Val	Trp	Phe	Gln	Asp	Thr	Val	Thr	Asp	Val	120	125	130	135
Lys	Ser	Trp	Lys	Glu	Leu	Ser	Asn	Val	Leu	Ser	Gly	Ile	Phe	140	145	150	155
Ala	Ser	Leu	Asn	Phe	Ile	Asp	Ser	Thr	Asn	Thr	Val	Thr	Pro	160	165	170	175

Ala Ser Phe Lys	Pro Leu Gly Leu	Ala Asn Asp Thr Asp His	Tyr
	155	160	165
Phe Leu Arg Tyr	Ala Val Leu Pro Arg	Glu Val Val Cys Thr	Glu
	170	175	180
Asn Leu Thr Pro	Trp Lys Lys Leu Leu	Pro Cys Ser Ser Lys	Ala
	185	190	195
Gly Leu Ser Val	Leu Leu Lys Ala Asp	Arg Leu Phe His Thr	Ser
	200	205	210
Tyr His Ser Gln	Ala Val His Ile Arg	Pro Val Cys Arg Asn	Ala
	215	220	225
Arg Cys Thr Ser	Ile Ser Trp Glu Leu	Arg Gln Thr Leu Ser	Val
	230	235	240
Val Phe Asp Ala	Phe Ile Thr Gly Gln	Gly Lys Lys Asp Trp	Ser
	245	250	255
Leu Phe Arg Met	Phe Ser Arg Thr Leu	Thr Glu Pro Cys Pro	Leu
	260	265	270
Ala Ser Glu Ser	Arg Val Tyr Val Asp	Ile Thr Thr Tyr Asn	Gln
	275	280	285
Asp Asn Glu Thr	Leu Glu Val His Pro	Pro Pro Thr Thr Thr	Tyr
	290	295	300
Gln Asp Val Ile	Leu Gly Thr Arg Lys	Thr Tyr Ala Ile Tyr	Asp
	305	310	315
Leu Leu Asp Thr	Ala Met Ile Asn Asn	Ser Arg Asn Leu Asn	Ile
	320	325	330
Gln Leu Lys Trp	Lys Arg Pro Pro Glu	Asn Glu Ala Pro Pro	Val
	335	340	345
Pro Phe Leu His	Ala Gln Arg Tyr Val	Ser Gly Tyr Gly Leu	Gln
	350	355	360
Lys Gly Glu Leu	Ser Thr Leu Leu Tyr	Asn Thr His Pro Tyr	Arg
	365	370	375
Ala Phe Pro Val	Leu Leu Leu Asp Thr	Val Pro Trp Tyr Leu	Arg
	380	385	390
Leu Tyr Val His	Thr Leu Thr Ile Thr	Ser Lys Gly Lys Glu	Asn
	395	400	405
Lys Pro Ser Tyr	Ile His Tyr Gln Pro	Ala Gln Asp Arg Leu	Gln
	410	415	420
Pro His Leu Leu	Glu Met Leu Ile Gln	Leu Pro Ala Asn Ser	Val
	425	430	435
Thr Lys Val Ser	Ile Gln Phe Glu Arg	Ala Leu Leu Lys Trp	Thr
	440	445	450
Glu Tyr Thr Pro	Asp Pro Asn His Gly	Phe Tyr Val Ser Pro	Ser
	455	460	465

Val	Leu	Ser	Ala	Leu	Val	Pro	Ser	Met	Val	Ala	Ala	Lys	Pro	Val
				470					475					480
Asp	Trp	Glu	Glu	Ser	Pro	Leu	Phe	Asn	Ser	Leu	Phe	Pro	Val	Ser
				485					490					495
Asp	Gly	Ser	Asn	Tyr	Phe	Val	Arg	Leu	Tyr	Thr	Glu	Pro	Leu	Leu
				500					505					510
Val	Asn	Leu	Pro	Thr	Pro	Asp	Phe	Ser	Met	Pro	Tyr	Asn	Val	Ile
				515					520					525
Cys	Leu	Thr	Cys	Thr	Val	Val	Ala	Val	Cys	Tyr	Gly	Ser	Phe	Tyr
				530					535					540
Asn	Leu	Leu	Thr	Arg	Thr	Phe	His	Ile	Glu	Glu	Pro	Arg	Thr	Gly
				545					550					555
Gly	Leu	Ala	Lys	Arg	Leu	Ala	Asn	Leu	Ile	Arg	Arg	Ala	Arg	Gly
				560					565					570

Val Pro Pro Leu

<210> 341  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 341  
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<210> 342  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic oligonucleotide probe

<400> 342  
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<210> 343  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 343  
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<210> 344  
 <211> 762  
 <212> DNA  
 <213> Homo sapiens

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 gtttggccag ctgacaacgt acgtgtcttc aagtcagatc ctccccagtg 150  
 tcacacagac caggactgtc tgggggaaag gaagtgttgt tacctgcact 200  
 gtgggttcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaaac 250  
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 aaagagctgc cttgcccttc tgcaatgtgt gatcacagct agaaggcact 650  
 gtcagagaag agaaactggt cctcaccaga tgctgaatct gctggtgcct 700  
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<210> 345  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 345  
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 35 40 45  
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys  
 50 55 60  
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys  
 65 70 75  
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro  
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 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser  
 95 100 105  
 Thr Arg Cys Pro Gln Lys  
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<210> 346  
 <211> 2528  
 <212> DNA  
 <213> Homo sapiens

<400> 346

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<210> 347

<211> 600

<212> PRT

<213> Homo sapiens

<400> 347

Met	Arg	Ser	Cys	Leu	Trp	Arg	Cys	Arg	His	Leu	Ser	Gln	Gly	Val
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Gln	Trp	Ser	Leu	Leu	Leu	Ala	Val	Leu	Val	Phe	Phe	Leu	Phe	Ala
			20						25					30
Leu	Pro	Ser	Phe	Ile	Lys	Glu	Pro	Gln	Thr	Lys	Pro	Ser	Arg	His
			35						40					45
Gln	Arg	Thr	Glu	Asn	Ile	Lys	Glu	Arg	Ser	Leu	Gln	Ser	Leu	Ala
			50						55					60
Lys	Pro	Lys	Ser	Gln	Ala	Pro	Thr	Arg	Ala	Arg	Arg	Thr	Thr	Ile

65										70					75				
Tyr	Ala	Glu	Pro	Ala	Pro	Glu	Asn	Asn	Ala	Leu	Asn	Thr	Gln	Thr					
				80					85					90					
Gln	Pro	Lys	Ala	His	Thr	Thr	Gly	Asp	Arg	Gly	Lys	Glu	Ala	Asn					
				95					100					105					
Gln	Ala	Pro	Pro	Glu	Glu	Gln	Asp	Lys	Val	Pro	His	Thr	Ala	Gln					
				110					115					120					
Arg	Ala	Ala	Trp	Lys	Ser	Pro	Glu	Lys	Glu	Lys	Thr	Met	Val	Asn					
				125					130					135					
Thr	Leu	Ser	Pro	Arg	Gly	Gln	Asp	Ala	Gly	Met	Ala	Ser	Gly	Arg					
				140					145					150					
Thr	Glu	Ala	Gln	Ser	Trp	Lys	Ser	Gln	Asp	Thr	Lys	Thr	Thr	Gln					
				155					160					165					
Gly	Asn	Gly	Gly	Gln	Thr	Arg	Lys	Leu	Thr	Ala	Ser	Arg	Thr	Val					
				170					175					180					
Ser	Glu	Lys	His	Gln	Gly	Lys	Ala	Ala	Thr	Thr	Ala	Lys	Thr	Leu					
				185					190					195					
Ile	Pro	Lys	Ser	Gln	His	Arg	Met	Leu	Ala	Pro	Thr	Gly	Ala	Val					
				200					205					210					
Ser	Thr	Arg	Thr	Arg	Gln	Lys	Gly	Val	Thr	Thr	Ala	Val	Ile	Pro					
				215					220					225					
Pro	Lys	Glu	Lys	Lys	Pro	Gln	Ala	Thr	Pro	Pro	Pro	Ala	Pro	Phe					
				230					235					240					
Gln	Ser	Pro	Thr	Thr	Gln	Arg	Asn	Gln	Arg	Leu	Lys	Ala	Ala	Asn					
				245					250					255					
Phe	Lys	Ser	Glu	Pro	Arg	Trp	Asp	Phe	Glu	Glu	Lys	Tyr	Ser	Phe					
				260					265					270					
Glu	Ile	Gly	Gly	Leu	Gln	Thr	Thr	Cys	Pro	Asp	Ser	Val	Lys	Ile					
				275					280					285					
Lys	Ala	Ser	Lys	Ser	Leu	Trp	Leu	Gln	Lys	Leu	Phe	Leu	Pro	Asn					
				290					295					300					
Leu	Thr	Leu	Phe	Leu	Asp	Ser	Arg	His	Phe	Asn	Gln	Ser	Glu	Trp					
				305					310					315					
Asp	Arg	Leu	Glu	His	Phe	Ala	Pro	Pro	Phe	Gly	Phe	Met	Glu	Leu					
				320					325					330					
Asn	Tyr	Ser	Leu	Val	Gln	Lys	Val	Val	Thr	Arg	Phe	Pro	Pro	Val					
				335					340					345					
Pro	Gln	Gln	Gln	Leu	Leu	Leu	Ala	Ser	Leu	Pro	Ala	Gly	Ser	Leu					
				350					355					360					
Arg	Cys	Ile	Thr	Cys	Ala	Val	Val	Gly	Asn	Gly	Gly	Ile	Leu	Asn					
				365					370					375					
Asn	Ser	His	Met	Gly	Gln	Glu	Ile	Asp	Ser	His	Asp	Tyr	Val	Phe					

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Arg Leu Ser Gly	Ala Leu Ile Lys Gly	Tyr Glu Gln Asp Val Gly			
	395	400			405
Thr Arg Thr Ser	Phe Tyr Gly Phe Thr	Ala Phe Ser Leu Thr Gln			
	410	415			420
Ser Leu Leu Ile	Leu Gly Asn Arg Gly	Phe Lys Asn Val Pro Leu			
	425	430			435
Gly Lys Asp Val	Arg Tyr Leu His Phe	Leu Glu Gly Thr Arg Asp			
	440	445			450
Tyr Glu Trp Leu	Glu Ala Leu Leu Met Asn	Gln Thr Val Met Ser			
	455	460			465
Lys Asn Leu Phe	Trp Phe Arg His Arg	Pro Gln Glu Ala Phe Arg			
	470	475			480
Glu Ala Leu His	Met Asp Arg Tyr Leu	Leu Leu His Pro Asp Phe			
	485	490			495
Leu Arg Tyr Met	Lys Asn Arg Phe Leu	Arg Ser Lys Thr Leu Asp			
	500	505			510
Gly Ala His Trp	Arg Ile Tyr Arg Pro	Thr Thr Gly Ala Leu Leu			
	515	520			525
Leu Leu Thr Ala	Leu Gln Leu Cys Asp	Gln Val Ser Ala Tyr Gly			
	530	535			540
Phe Ile Thr Glu	Gly His Glu Arg Phe	Ser Asp His Tyr Tyr Asp			
	545	550			555
Thr Ser Trp Lys	Arg Leu Ile Phe Tyr	Ile Asn His Asp Phe Lys			
	560	565			570
Leu Glu Arg Glu	Val Trp Lys Arg Leu	His Asp Glu Gly Ile Ile			
	575	580			585
Arg Leu Tyr Gln	Arg Pro Gly Pro Gly	Thr Ala Lys Ala Lys Asn			
	590	595			600

<210> 348

<211> 496

<212> DNA

<213> Homo sapiens

<400> 348

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gaaggacaag tttctaaaac accttacagg cctcttttat ttagtccaa 150

agtgcagcaa acacttccat agactttatc acaaacaccag agactgcacc 200

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ctttatcac atcccccat ggacaagaga tttatttttg cagacagact 400  
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<210> 349

<211> 91

<212> PRT

<213> Homo sapiens

<400> 349

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 20 25 30  
 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu  
 35 40 45  
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His  
 50 55 60  
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala  
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 Lys

<210> 350

<211> 1141

<212> DNA

<213> Homo sapiens

<400> 350

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<210> 351

<211> 197

<212> PRT

<213> Homo sapiens

<400> 351

Met	Pro	Pro	Ala	Gly	Leu	Arg	Arg	Ala	Ala	Pro	Leu	Thr	Ala	Ile
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Ala	Leu	Leu	Val	Leu	Gly	Ala	Pro	Leu	Val	Leu	Ala	Gly	Glu	Asp
				20					25					30
Cys	Leu	Trp	Tyr	Leu	Asp	Arg	Asn	Gly	Ser	Trp	His	Pro	Gly	Phe
				35					40					45
Asn	Cys	Glu	Phe	Phe	Thr	Phe	Cys	Cys	Gly	Thr	Cys	Tyr	His	Arg
				50					55					60
Tyr	Cys	Cys	Arg	Asp	Leu	Thr	Leu	Leu	Ile	Thr	Glu	Arg	Gln	Gln
				65					70					75
Lys	His	Cys	Leu	Ala	Phe	Ser	Pro	Lys	Thr	Ile	Ala	Gly	Ile	Ala
				80					85					90
Ser	Ala	Val	Ile	Leu	Phe	Val	Ala	Val	Val	Ala	Thr	Thr	Ile	Cys
				95					100					105
Cys	Phe	Leu	Cys	Ser	Cys	Cys	Tyr	Leu	Tyr	Arg	Arg	Arg	Gln	Gln
				110					115					120
Leu	Gln	Ser	Pro	Phe	Glu	Gly	Gln	Glu	Ile	Pro	Met	Thr	Gly	Ile
				125					130					135
Pro	Val	Gln	Pro	Val	Tyr	Pro	Tyr	Pro	Gln	Asp	Pro	Lys	Ala	Gly
				140					145					150
Pro	Ala	Pro	Pro	Gln	Pro	Gly	Phe	Met	Tyr	Pro	Pro	Ser	Gly	Pro
				155					160					165
Ala	Pro	Gln	Tyr	Pro	Leu	Tyr	Pro	Ala	Gly	Pro	Pro	Val	Tyr	Asn
				170					175					180

Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro  
185 190 195

Gly Ala

<210> 352  
<211> 3226  
<212> DNA  
<213> Homo sapiens

<400> 352  
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ctcaaatggt cccttgcaac catgtcattt ctactttcct cactgttggc 150  
tctcttaact gtgtccactc ctctcatggg tcagagcact gaagcatctc 200  
caaaacgtag tgatgggaca ccatttcott ggaataaaat acgacttctt 250  
gagtacgtca tcccagttca ttatgatctc ttgatccatg caaaccttac 300  
cacgctgacc ttctggggaa ccacgaaagt agaatacaca gccagtcagc 350  
ccaccagcac catcatcctg catagtcacc acctgcagat atctagggcc 400  
accctcagga agggagctgg agagaggcta tcggaagaac ccctgcaggt 450  
cctggaacac cccctcagg agcaaatgc actgctggct cccgagcccc 500  
tccttgctgg gctccgtac acagtgtgca ttactatgc tggcaatctt 550  
tcggagactt tccacggatt ttacaaaagc acctacagaa ccaagggaagg 600  
ggaactgagg atactagcat caacacaatt tgaaccact gcagctagaa 650  
tggcctttcc ctgctttgat gaacctgctt tcaaagcaag tttctcaatc 700  
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gaaatctgtg actgttgctg aaggactcat agaagaccat tttgatgtca 800  
ctgtgaagat gagcacctat ctggtggcct tcatcatttc agattttgag 850  
tctgtcagca agataacca gagtggagtc aaggtttctg tttatgtctg 900  
gccagacaag ataatcaag cagattatgc actggatgct gcggtgactc 950  
ttctagaatt ttatgaggat tatttcagca taocgtatcc cctaccacaa 1000  
caagatcttg ctgctattcc cgactttcag tctggtgcta tggaaaactg 1050  
gggactgaca acatatagag aatctgctct gttgtttgat gcagaaaagt 1100  
cttctgcato aagtaagett ggcacacag tgactgtggc ccatgaactg 1150  
gccaccagat ggtttgggaa cctggtcact atggaatggt ggaatgatct 1200  
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tgaccatcc tgaactgaaa gttggagatt atttcttttg caaatgtttt 1300

gacgcaatgg aggtagatgc tttaaattcc tcacacctg tgtctacacc 1350  
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 taaaaaaa gaggaacctgt gggatagtat ggcaagtatt tgcacctacag 1550  
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 ggctattaca ttgtgcatta cgaggatgat ggatgggact ctttgactgg 1950  
 ccttttaaaa ggaacacaca cagcagtcag cagtaatgat cgggcaagtc 2000  
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 aagccttgg atttatccct gtacttgaaa catgaaactg aaattatgcc 2100  
 cgtgtttcaa ggtttgaatg agctgattcc tatgtataag ttaattggaga 2150  
 aaagagatat gaatgaagt gaaactcaat tcaaggcctt cctcatcagg 2200  
 ctgctaaggg acctcattga taagcagaca tggacagacg agggctcagt 2250  
 ctcagagcaa atgctcgga gtgaactact actcctcgcc tgtgtgcaca 2300  
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 tgcagaacct aaaataagga aaagcttcaa tggctactag atgaaagctt 2550  
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 ttggcaggaa ccagtagga taccactagg cctggcaatt tctgaggaaa 2650  
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 cgttgtgtcc aacagacaat tgaaacatt gaagaaaaa cgtgttgat 2850  
 ggataagaat ttgtataaaa tcagagtgtg gctgcaaagt gaaaagcttg 2900

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 caacattttt ttgagtgtat tttaaacta gagatggctg ttttggtccc 3000  
 aactggagat acttttttcc cttcaactca ttttttgact atccctgtga 3050  
 aaagaatagc tgtagtgggt tcatgaatgg gctttttcat gaatgggcta 3100  
 tcgctaccat gtgttttggg catcacagggt gttgccctgc aacgtaaacc 3150  
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 aaaaaaaaaa aaaaaaaaaa aaaaaa 3226

<210> 353

<211> 941

<212> PRT

<213> Homo sapiens

<400> 353

Met	Val	Phe	Leu	Pro	Leu	Lys	Trp	Ser	Leu	Ala	Thr	Met	Ser	Phe
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Leu	Leu	Ser	Ser	Leu	Leu	Ala	Leu	Leu	Thr	Val	Ser	Thr	Pro	Ser
				20					25					30
Trp	Cys	Gln	Ser	Thr	Glu	Ala	Ser	Pro	Lys	Arg	Ser	Asp	Gly	Thr
				35					40					45
Pro	Phe	Pro	Trp	Asn	Lys	Ile	Arg	Leu	Pro	Glu	Tyr	Val	Ile	Pro
				50					55					60
Val	His	Tyr	Asp	Leu	Leu	Ile	His	Ala	Asn	Leu	Thr	Thr	Leu	Thr
				65					70					75
Phe	Trp	Gly	Thr	Thr	Lys	Val	Glu	Ile	Thr	Ala	Ser	Gln	Pro	Thr
				80					85					90
Ser	Thr	Ile	Ile	Leu	His	Ser	His	His	Leu	Gln	Ile	Ser	Arg	Ala
				95					100					105
Thr	Leu	Arg	Lys	Gly	Ala	Gly	Glu	Arg	Leu	Ser	Glu	Glu	Pro	Leu
				110					115					120
Gln	Val	Leu	Glu	His	Pro	Pro	Gln	Glu	Gln	Ile	Ala	Leu	Leu	Ala
				125					130					135
Pro	Glu	Pro	Leu	Leu	Val	Gly	Leu	Pro	Tyr	Thr	Val	Val	Ile	His
				140					145					150
Tyr	Ala	Gly	Asn	Leu	Ser	Glu	Thr	Phe	His	Gly	Phe	Tyr	Lys	Ser
				155					160					165
Thr	Tyr	Arg	Thr	Lys	Glu	Gly	Glu	Leu	Arg	Ile	Leu	Ala	Ser	Thr
				170					175					180
Gln	Phe	Glu	Pro	Thr	Ala	Ala	Arg	Met	Ala	Phe	Pro	Cys	Phe	Asp
				185					190					195
Glu	Pro	Ala	Phe	Lys	Ala	Ser	Phe	Ser	Ile	Lys	Ile	Arg	Arg	Glu
				200					205					210
Pro	Arg	His	Leu	Ala	Ile	Ser	Asn	Met	Pro	Leu	Val	Lys	Ser	Val



Thr Val Ala Glu	215	Gly Leu Ile Glu Asp	220	His Phe Asp Val Thr Val	225
	230		235		240
Lys Met Ser Thr		Tyr Leu Val Ala Phe		Ile Ile Ser Asp Phe Glu	
	245		250		255
Ser Val Ser Lys		Ile Thr Lys Ser Gly		Val Lys Val Ser Val Tyr	
	260		265		270
Ala Val Pro Asp		Lys Ile Asn Gln Ala Asp		Tyr Ala Leu Asp Ala	
	275		280		285
Ala Val Thr Leu		Leu Glu Phe Tyr Glu Asp		Tyr Phe Ser Ile Pro	
	290		295		300
Tyr Pro Leu Pro		Lys Gln Asp Leu Ala Ala		Ile Pro Asp Phe Gln	
	305		310		315
Ser Gly Ala Met		Glu Asn Trp Gly Leu Thr		Thr Tyr Arg Glu Ser	
	320		325		330
Ala Leu Leu Phe		Asp Ala Glu Lys Ser		Ser Ala Ser Ser Lys Leu	
	335		340		345
Gly Ile Thr Val		Thr Val Ala His Glu Leu		Ala His Gln Trp Phe	
	350		355		360
Gly Asn Leu Val		Thr Met Glu Trp Trp		Asn Asp Leu Trp Leu Asn	
	365		370		375
Glu Gly Phe Ala		Lys Phe Met Glu Phe Val		Ser Val Ser Val Thr	
	380		385		390
His Pro Glu Leu		Lys Val Gly Asp Tyr Phe		Phe Gly Lys Cys Phe	
	395		400		405
Asp Ala Met Glu		Val Asp Ala Leu Asn Ser		Ser His Pro Val Ser	
	410		415		420
Thr Pro Val Glu		Asn Pro Ala Gln Ile Arg		Glu Met Phe Asp Asp	
	425		430		435
Val Ser Tyr Asp		Lys Gly Ala Cys Ile Leu		Asn Met Leu Arg Glu	
	440		445		450
Tyr Leu Ser Ala		Asp Ala Phe Lys Ser Gly		Ile Val Gln Tyr Leu	
	455		460		465
Gln Lys His Ser		Tyr Lys Asn Thr Lys Asn		Glu Asp Leu Trp Asp	
	470		475		480
Ser Met Ala Ser		Ile Cys Pro Thr Asp Gly		Val Lys Gly Met Asp	
	485		490		495
Gly Phe Cys Ser		Arg Ser Gln His Ser Ser		Ser Ser Ser His Trp	
	500		505		510
His Gln Glu Gly		Val Asp Val Lys Thr Met		Met Asn Thr Trp Thr	
	515		520		525
Leu Gln Arg Gly		Phe Pro Leu Ile Thr Ile		Thr Val Arg Gly Arg	

530	535	540
Asn Val His Met	Lys Gln Glu His Tyr	Met Lys Gly Ser Asp Gly
545	550	555
Ala Pro Asp Thr	Gly Tyr Leu Trp His	Val Pro Leu Thr Phe Ile
560	565	570
Thr Ser Lys Ser	Asn Met Val His Arg	Phe Leu Leu Lys Thr Lys
575	580	585
Thr Asp Val Leu	Ile Leu Pro Glu Glu	Val Glu Trp Ile Lys Phe
590	595	600
Asn Val Gly Met	Asn Gly Tyr Tyr Ile	Val His Tyr Glu Asp Asp
605	610	615
Gly Trp Asp Ser	Leu Thr Gly Leu Leu	Lys Gly Thr His Thr Ala
620	625	630
Val Ser Ser Asn	Asp Arg Ala Ser Leu	Ile Asn Asn Ala Phe Gln
635	640	645
Leu Val Ser Ile	Gly Lys Leu Ser Ile	Glu Lys Ala Leu Asp Leu
650	655	660
Ser Leu Tyr Leu	Lys His Glu Thr Glu	Ile Met Pro Val Phe Gln
665	670	675
Gly Leu Asn Glu	Leu Ile Pro Met Tyr	Lys Leu Met Glu Lys Arg
680	685	690
Asp Met Asn Glu	Val Glu Thr Gln Phe	Lys Ala Phe Leu Ile Arg
695	700	705
Leu Leu Arg Asp	Leu Ile Asp Lys Gln	Thr Trp Thr Asp Glu Gly
710	715	720
Ser Val Ser Glu	Gln Met Leu Arg Ser	Glu Leu Leu Leu Leu Ala
725	730	735
Cys Val His Asn	Tyr Gln Pro Cys Val	Gln Arg Ala Glu Gly Tyr
740	745	750
Phe Arg Lys Trp	Lys Glu Ser Asn Gly	Asn Leu Ser Leu Pro Val
755	760	765
Asp Val Thr Leu	Ala Val Phe Ala Val	Gly Ala Gln Ser Thr Glu
770	775	780
Gly Trp Asp Phe	Leu Tyr Ser Lys Tyr	Gln Phe Ser Leu Ser Ser
785	790	795
Thr Glu Lys Ser	Gln Ile Glu Phe Ala	Leu Cys Arg Thr Gln Asn
800	805	810
Lys Glu Lys Leu	Gln Trp Leu Leu Asp	Glu Ser Phe Lys Gly Asp
815	820	825
Lys Ile Lys Thr	Gln Glu Phe Pro Gln	Ile Leu Thr Leu Ile Gly
830	835	840
Arg Asn Pro Val	Gly Tyr Pro Leu Ala	Trp Gln Phe Leu Arg Lys

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser Ser			
	860	865			870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr Arg			
	875	880			885
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys Glu			
	890	895			900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr Ile			
	905	910			915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile Arg			
	920	925			930
Val Trp Leu Gln	Ser Glu Lys Leu Glu	Arg Met			
	935	940			

<210> 354  
 <211> 1587  
 <212> DNA  
 <213> Homo sapiens

<400> 354  
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 gttcagcatg tgtggaaggt gtccgaccta ccccggaat ggacccctaa 150  
 gaacaccagc tgcgacagcg gcttgggggt ccaggacacg ttgatgctca 200  
 ttgagagcgg accccaagtg agcctgggtgc tctccaaggg ctgcacggag 250  
 gccaaaggacc aggagcccg cgtcaactgag caccggatgg gccccggcct 300  
 ctccctgatc tcctacacct tcgtgtgccc ccaggaggac ttctgcaaca 350  
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 gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500  
 tcctcaggct caggggagga ggcattctct ccaatctgag agtccaggga 550  
 tgcatgcccc agccagggtg caacctgtct aatgggacac aggaaattgg 600  
 gcccggtggg atgactgaga actgcaatag gaaagatttt ctgacctgtc 650  
 atcgggggac caccattatg acacacggaa acttgggtca agaaccact 700  
 gattggacca catgaatac cgagatgtgc gaggtggggc aggtgtgtca 750  
 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctggtgggga 800  
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 cactcagccc ctctcggggt gcttgtggcc tcctataccc acttctgtct 900  
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tccctcctca agctgcccct gtcccaggag accggcagtg tccctacctgt 1000  
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 cagggcgccc actcattggt atgatgggta cattcatctc tcaggagggtg 1100  
 ggctgtccac caaaatgagc attcagggct gcgtggccca accttccagc 1150  
 ttcttgttga accacaccag acaaatcggg atcttctctg cgcgtgagaa 1200  
 gcgtgatgtg cagcctcctg cctctcagca tgaggagggt ggggctgagg 1250  
 gcctggagtc tctcacttgg ggggtggggc tggcactggc ccacgcgtg 1300  
 tgggtgggag tggtttggcc ttctgtctaa ctctattacc ccacgattc 1350  
 ttcaccgctg ctgaccaccc acactcaacc tccctctgac ctcataacct 1400  
 aatggccttg gacaccagat tctttcccat tctgtccatg aatcatcttc 1450  
 cccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500  
 gcctggagca tccggacttg ccctatggga gaggggagcg tggaggagtg 1550  
 gctgcatgta tctgataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Leu	Ala	Leu	Leu	Gly	Phe	Ile	Leu	Pro	15
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Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln	30
				20						25					
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys	45
				35						40					
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met	60
				50						55					
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly	75
				65						70					
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg	90
				80						85					
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg	105
				95						100					
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp	120
				110						115					
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val	135
				125						130					
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile	150
				140						145					
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu	

155	160	165
Arg Gly Gly Gly Ile Phe Ser Asn Leu	Arg Val Gln Gly Cys Met	
170	175	180
Pro Gln Pro Gly Cys Asn Leu Leu Asn	Gly Thr Gln Glu Ile Gly	
185	190	195
Pro Val Gly Met Thr Glu Asn Cys Asn	Arg Lys Asp Phe Leu Thr	
200	205	210
Cys His Arg Gly Thr Thr Ile Met Thr	His Gly Asn Leu Ala Gln	
215	220	225
Glu Pro Thr Asp Trp Thr Thr Ser Asn	Thr Glu Met Cys Glu Val	
230	235	240
Gly Gln Val Cys Gln Glu Thr Leu Leu	Leu Ile Asp Val Gly Leu	
245	250	255
Thr Ser Thr Leu Val Gly Thr Lys Gly	Cys Ser Thr Val Gly Ala	
260	265	270
Gln Asn Ser Gln Lys Thr Thr Ile His	Ser Ala Pro Pro Gly Val	
275	280	285
Leu Val Ala Ser Tyr Thr His Phe Cys	Ser Ser Asp Leu Cys Asn	
290	295	300
Ser Ala Ser Ser Ser Ser Val Leu Leu	Asn Ser Leu Pro Pro Gln	
305	310	315
Ala Ala Pro Val Pro Gly Asp Arg Gln	Cys Pro Thr Cys Val Gln	
320	325	330
Pro Leu Gly Thr Cys Ser Ser Gly Ser	Pro Arg Met Thr Cys Pro	
335	340	345
Arg Gly Ala Thr His Cys Tyr Asp Gly	Tyr Ile His Leu Ser Gly	
350	355	360
Gly Gly Leu Ser Thr Lys Met Ser Ile	Gln Gly Cys Val Ala Gln	
365	370	375
Pro Ser Ser Phe Leu Leu Asn His Thr	Arg Gln Ile Gly Ile Phe	
380	385	390
Ser Ala Arg Glu Lys Arg Asp Val Gln	Pro Pro Ala Ser Gln His	
395	400	405
Glu Gly Gly Gly Ala Glu Gly Leu Glu	Ser Leu Thr Trp Gly Val	
410	415	420
Gly Leu Ala Leu Ala Pro Ala Leu Trp	Trp Gly Val Val Cys Pro	
425	430	435

Ser Cys

<210> 356  
 <211> 1238  
 <212> DNA  
 <213> Homo sapiens

<400> 356  
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 tcagcctggc ctctctgtca ctgctgccat ctggacatcc tcagccggct 150  
 ggcatgacg cctgctctgt gcagatcctc gtccttggtc tcaaaggaga 200  
 tgcgggagag aaggagagaca aaggcgcccc cggacggcct ggaagagtgc 250  
 gccccacggg agaaaaagga gacatggggg acaaaggaca gaaaggcagt 300  
 gtgggtgctc atggaaaaat tgggccatt ggctctaaag gtgagaaagg 350  
 agattccggt gacataggac cccctgggtc taatggagaa ccaggcctcc 400  
 catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450  
 gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtcgccgg 500  
 tgtgcgcgag acggagagca agatctacct gctggtgaag gaggagaagc 550  
 gctacgcgga cggccagctg tcttgccagg gccggggggg cagctgagc 600  
 atgcccaagg acgaggtgc caatggcctg atggccgcat acctggcgca 650  
 agccggcctg gccctgtct tcatcgcat caacgacctg gagaaggagg 700  
 gcgcctctgt gtactctgac cactccccc tgcggacctt caacaagtgg 750  
 cgcagcggtg agcccaacaa tgccctagcag gaggaggact gcgtggagat 800  
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 tcatgtgtga gtttgacaag gagaacatgt gagcctcagg ctggggctgc 900  
 ccattggggg ccccatatgt cctgcaggg ttggcaggga cagagcccag 950  
 accatggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000  
 tgagtagagg gctgtgtct aaactgagaa aatggcctat gcttaaggag 1050  
 aaaatgaaag tggttcctggg gtgctgtctc tgaagaagca gagtttctt 1100  
 acctgtattg tagcccaat gtcattatgt aattattacc cagaattgct 1150  
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 tagtgagta gtttaagtcca aaaaaaaaa aaaaaaaa 1238

<210> 357  
 <211> 271  
 <212> PRT  
 <213> Homo sapiens

<400> 357  
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 1 5 10 15  
 Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp  
 20 25 30

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	
				35					40					45	
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	
				50					55					60	
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	
				65					70					75	
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	
				80					85					90	
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	
				95					100					105	
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	
				110					115					120	
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	
				125					130					135	
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	
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Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	
				155					160					165	
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	
				170					175					180	
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	
				185					190					195	
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	
				200					205					210	
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	
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Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	
				230					235					240	
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	
				245					250					255	
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	
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Met

<210> 358

<211> 972

<212> DNA

<213> Homo sapiens

<400> 358

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aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200  
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 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgtctcca 300  
 gagactcttc aaaagccact catctctgga gggattgtct aaagccctga 350  
 gccaggctag cacagatcct aaggaatcaa catctccoga gaaacgtgac 400  
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 ctgagattcc tgtagtgtcc tacattaaaa atataatgtc tctctctatt 900  
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<210> 359

<211> 135

<212> PRT

<213> Homo sapiens

<400> 359

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Ala	Gln	Ser	Phe	Gly	Ala	Val	Cys	Lys	Glu	Pro	Gln	Glu	Glu	Val
				20					25					30
Val	Pro	Gly	Gly	Arg	Ser	Lys	Arg	Asp	Pro	Asp	Leu	Tyr	Gln	
				35				40					45	
Leu	Leu	Gln	Arg	Leu	Phe	Lys	Ser	His	Ser	Ser	Leu	Glu	Gly	Leu
				50				55					60	
Leu	Lys	Ala	Leu	Ser	Gln	Ala	Ser	Thr	Asp	Pro	Lys	Glu	Ser	Thr
				65				70					75	
Ser	Pro	Glu	Lys	Arg	Asp	Met	His	Asp	Phe	Phe	Val	Gly	Leu	Met
				80				85					90	
Gly	Lys	Arg	Ser	Val	Gln	Pro	Glu	Gly	Lys	Thr	Gly	Pro	Phe	Leu
				95				100					105	
Pro	Ser	Val	Arg	Val	Pro	Arg	Pro	Leu	His	Pro	Asn	Gln	Leu	Gly
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<210> 360  
<211> 1738  
<212> DNA  
<213> Homo sapiens

<400> 360  
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gagacgccag cgagctggtg attggagccc tgcggagagc tcaagcgccc 150  
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ggagtgaggc catgagctgc gtctcggttg gtgtcatccc cttggggctg 250  
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tccgcagagc catccccagg gaggacaagg aggagatcct catgtctgac 400  
aacaagcttc ggggccagggt gcagcctcag gctccaaca tggagtacat 450  
ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggctctg 500  
gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550  
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gttaagcgat cctgcttcag cctcccaagt agctggaact acaggcatgc 750  
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ctacgttgcc caggctggtc ttgaactcct aggtcacaac aatcctcctg 850  
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ctctggctct gttcttaaca ttctgcaaa acaacacacg tgggttccct 950  
gtgcagagcc tgctcgttg ccttcatgtc actcttggtg gctccactgg 1000  
gaacacagct ctcagccttt ccacacctga gccagagtgg ggagggggcc 1050  
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accacootga cttctcctta gccogtgtga gcctcacttt ccacttggag 1150  
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cgggaaagga gtaaacggtg acagaagaca gccaaagtca accctcccg 1300  
gtgattgtga tgggtgttcc aggtgtggtt gggcgatgct gctacttgac 1350

cccaagctcc agtgtgaaa ctctcttctt ggctggtttt ccagaactac 1400  
 agaggaatgg accacagtct tccagggtcc ctctctgtcc accaaccggg 1450  
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 cacgtcccgc cctgggtaac atggtaaagc cccgtctcta caaaaaaatc 1550  
 caagttagcc gggcatgggt gtgcgcacct gtatgccag ctgcagtggtg 1600  
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650  
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<210> 361

<211> 159

<212> PRT

<213> Homo sapiens

<400> 361

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Leu	Val	Cys	Gly	Ser	Gln	Gly	Tyr	Leu	Leu	Pro	Asn	Val	Thr	Leu
				20					25					30
Leu	Glu	Glu	Leu	Leu	Ser	Lys	Tyr	Gln	His	Asn	Glu	Ser	His	Ser
				35					40					45
Arg	Val	Arg	Arg	Ala	Ile	Pro	Arg	Glu	Asp	Lys	Glu	Glu	Ile	Leu
				50					55					60
Met	Leu	His	Asn	Lys	Leu	Arg	Gly	Gln	Val	Gln	Pro	Gln	Ala	Ser
				65					70					75
Asn	Met	Glu	Tyr	Met	Val	Ser	Ala	Gly	Ser	Gly	Arg	Arg	Gly	Trp
				80					85					90
His	Arg	Gly	Trp	Gly	Leu	Gly	His	Gln	Pro	Ala	Leu	Phe	Pro	Ser
				95					100					105
Gln	Leu	Cys	Ser	Pro	Ala	Ser	Ala	Cys	Asp	Gly	Trp	Leu	Arg	Val
				110					115					120
Ser	Ser	Gly	Arg	Gly	Gly	Ser	Arg	Leu	Cys	Ser	Val	Leu	Phe	Val
				125					130					135
Cys	Phe	Glu	Thr	Gly	Ser	His	Ser	Ala	Thr	Asp	Ala	Gly	Val	Gln
				140					145					150
Trp	His	Asn	Arg	His	Ala	Leu	Lys	Pro						
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<210> 362

<211> 422

<212> DNA

<213> Homo sapiens

<400> 362

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gagtcctttc tgacaattc ctcctatgag tccagcttcc tgggaattgct 200  
tgaaaagctc tgcctcctcc tccatctccc ttcagggacc agcgtcaccc 250  
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ttgaagcctg tgtccttctt gcccgggct tttgggcccg ggatgcagga 350  
ggcaggcccc gaccctgtct ttcagcaggc cccacccto ctgagtgga 400  
ataataaaa ttcggtatgc tg 422

<210> 363  
<211> 78  
<212> PRT  
<213> Homo sapiens

<400> 363  
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20 25 30  
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu  
35 40 45  
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly  
50 55 60  
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val  
65 70 75  
Cys Asn Thr

<210> 364  
<211> 826  
<212> DNA  
<213> Homo sapiens

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attgcagaag cttcattcag tgttgaaaat gaatgcttag tggatctgtg 250  
cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300  
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aaaaggcatg tatttaaatc tgtatgatgc tcaaccatct ttagttggga 400  
aaggctcctg aaagccaatg gaaatacttt ttttttttct tggcactaat 450

caagtgagtg ttaccttttc acttagtagg atgtgtgtgtt acgctagtaa 500  
 aatagaaac tgtgtttatt ctacaggtatt ttgaaacaa cagccatcat 550  
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<210> 365

<211> 67

<212> PRT

<213> Homo sapiens

<400> 365

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Thr	Val	Phe	Cys	Val	Leu	Leu	Ile	Phe	Thr	Ile	Ala	Glu	Ala	Ser
				20					25					30
Phe	Ser	Val	Glu	Asn	Glu	Cys	Leu	Val	Asp	Leu	Cys	Leu	Leu	Arg
				35					40					45
Ile	Cys	Tyr	Lys	Leu	Ser	Gly	Val	Pro	Asn	Gln	Cys	Arg	Val	Pro
				50					55					60
Leu	Pro	Ser	Asp	Cys	Ser	Lys								
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<210> 366

<211> 2475

<212> DNA

<213> Homo sapiens

<400> 366

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 ttttgcagga tgatgggtggc ccttcgagga gcttctgcat tgctgtgtct 150  
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 tgggtgcatta catctaccag cgctttcgag tcttgagca agggctggaa 250  
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 aaaaaatata tctgtcatgc tgggaagatg tcagacctac acaagtgtgt 350  
 acaagatgct agtgggtaac ttggcactga gagttgaacg tgcccaacgg 400  
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<210> 367

<211> 402

<212> PRT

<213> Homo sapiens

<400> 367

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Met	Val	His	Tyr	Ile	Tyr	Gln	Arg	Phe	Arg	Val	Leu	Glu	Gln	Gly	35	40	45	
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Gln	Glu	Phe	Ser	Lys	Asn	Ile	Ser	Val	Met	Leu	Gly	Arg	Cys	Gln	65	70	75	
Thr	Tyr	Thr	Ser	Glu	Tyr	Lys	Ser	Ala	Val	Gly	Asn	Leu	Ala	Leu	80	85	90	
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Arg	Glu	Ala	Asp	Glu	Cys	Ile	Val	Ser	Glu	Asp	Lys	Thr	Leu	Ala	110	115	120	
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Leu	Lys	Ile	Val	Lys	Lys	Met	Met	Asp	Thr	His	Gly	Ser	Trp	Met	155	160	165	
Lys	Asp	Ala	Val	Tyr	Asn	Ser	Pro	Lys	Val	Tyr	Leu	Leu	Ile	Gly	170	175	180	
Ser	Arg	Asn	Asn	Thr	Val	Trp	Glu	Phe	Ala	Asn	Ile	Arg	Ala	Phe	185	190	195	
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Phe	Phe	His	Asn	Gln	Ala	Thr	Ser	Asn	Glu	Ile	Ile	Lys	Tyr	Asn
				230					235					240
Leu	Gln	Lys	Arg	Thr	Val	Glu	Asp	Arg	Met	Leu	Leu	Pro	Gly	Gly
				245					250					255
Val	Gly	Arg	Ala	Leu	Val	Tyr	Gln	His	Ser	Pro	Ser	Thr	Tyr	Ile
				260					265					270
Asp	Leu	Ala	Val	Asp	Glu	His	Gly	Leu	Trp	Ala	Ile	His	Ser	Gly
				275					280					285
Pro	Gly	Thr	His	Ser	His	Leu	Val	Leu	Thr	Lys	Ile	Glu	Pro	Gly
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Thr	Leu	Gly	Val	Glu	His	Ser	Trp	Asp	Thr	Pro	Cys	Arg	Ser	Gln
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Tyr	Ser	Thr	Gly	Gly	Gln	Gly	Pro	His	Arg	Ile	Thr	Cys	Ile	Tyr
				335					340					345
Asp	Pro	Leu	Gly	Thr	Ile	Ser	Glu	Glu	Asp	Leu	Pro	Asn	Leu	Phe
				350					355					360
Phe	Pro	Lys	Arg	Pro	Arg	Ser	His	Ser	Met	Ile	His	Tyr	Asn	Pro
				365					370					375
Arg	Asp	Lys	Gln	Leu	Tyr	Ala	Trp	Asn	Glu	Gly	Asn	Gln	Ile	Ile
				380					385					390
Tyr	Lys	Leu	Gln	Thr	Lys	Arg	Lys	Leu	Pro	Leu	Lys			
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<210> 368

<211> 2281

<212> DNA

<213> Homo sapiens

<400> 368

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<210> 369

<211> 447

<212> FRT

<213> Homo sapiens

<400> 369

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				20					25					30
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln
				35					40					45
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys
				50					55					60
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His
				65					70					75
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser
				80					85					90
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu
				95					100					105
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys
				110					115					120
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu
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Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala
				140					145					150
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys
				155					160					165
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro
				170					175					180
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly
				185					190					195
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr
				200					205					210
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile
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Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys
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Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370

<211> 1415

<212> DNA

<213> Homo sapiens

<400> 370

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<210> 371  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys  
 50 55 60  
 His Pro Gly Ser His Lys Val Pro Phe Arg Lys Arg Lys His  
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His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg Phe Pro  
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Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn Phe  
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<210> 372

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 372

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<210> 373  
 <211> 229  
 <212> PRM  
 <213> Homo sapiens

<400> 373

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Ser	Ile	Gly	Ala	Gly	Ala	Leu	Gly	Ala	Ala	Ala	Leu	Ala	Leu	Leu
				20					25					30
Leu	Ala	Asn	Thr	Asp	Val	Phe	Leu	Ser	Lys	Pro	Gln	Lys	Ala	Ala
				35					40					45
Leu	Glu	Tyr	Leu	Glu	Asp	Ile	Asp	Leu	Lys	Thr	Leu	Glu	Lys	Glu
				50					55					60
Pro	Arg	Thr	Phe	Lys	Ala	Lys	Glu	Leu	Trp	Glu	Lys	Asn	Gly	Ala
				65					70					75
Val	Ile	Met	Ala	Val	Arg	Arg	Pro	Gly	Cys	Phe	Leu	Cys	Arg	Glu
				80					85					90
Glu	Ala	Ala	Asp	Leu	Ser	Ser	Leu	Lys	Ser	Met	Leu	Asp	Gln	Leu
				95					100					105
Gly	Val	Pro	Leu	Tyr	Ala	Val	Val	Lys	Glu	His	Ile	Arg	Thr	Glu
				110					115					120
Val	Lys	Asp	Phe	Gln	Pro	Tyr	Phe	Lys	Gly	Glu	Ile	Phe	Leu	Asp
				125					130					135
Glu	Lys	Lys	Lys	Phe	Tyr	Gly	Pro	Gln	Arg	Arg	Lys	Met	Met	Phe
				140					145					150
Met	Gly	Phe	Ile	Arg	Leu	Gly	Val	Trp	Tyr	Asn	Phe	Phe	Arg	Ala
				155					160					165
Trp	Asn	Gly	Gly	Phe	Ser	Gly	Asn	Leu	Glu	Gly	Glu	Gly	Phe	Ile
				170					175					180
Leu	Gly	Gly	Val	Phe	Val	Val	Gly	Ser	Gly	Lys	Gln	Gly	Ile	Leu
				185					190					195
Leu	Glu	His	Arg	Glu	Lys	Glu	Phe	Gly	Asp	Lys	Val	Asn	Leu	Leu
				200					205					210
Ser	Val	Leu	Glu	Ala	Ala	Lys	Met	Ile	Lys	Pro	Gln	Thr	Leu	Ala
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Ser Glu Lys Lys

<210> 374  
 <211> 744  
 <212> DNA  
 <213> Homo sapiens

<400> 374

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<210> 375

<211> 123

<212> PRT

<213> Homo sapiens

<400> 375

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Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr	Ser	35	40	45	
Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala	Ile	50	55	60	
Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Gly	65	70	75	
Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr	Glu	80	85	90	
Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	100	Phe	Ser	His	Ala	Ala	95	100	105	
Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly	Cys	110	115	120	

Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

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<210> 377

<211> 90

<212> PRT

<213> Homo sapiens

<400> 377

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Ile	Trp	Arg	Ser	Asn	Ser	Gly	Ser	Asn	Thr	Leu	Glu	Asn	Gly
				20				25					30
Phe	Leu	Ser	Arg	Asn	Lys	Glu	Asn	His	Ser	Gln	Pro	Thr	Gln
				35				40					45
Ser	Leu	Glu	Asp	Ser	Val	Thr	Pro	Thr	Lys	Ala	Val	Lys	Thr
				50				55					60
Gly	Lys	Gly	Ile	Val	Lys	Gly	Arg	Asn	Leu	Asp	Ser	Arg	Gly
				65				70					75
Ile	Leu	Gly	Ala	Glu	Ala	Trp	Gly	Arg	Gly	Val	Lys	Lys	Asn
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<210> 378

<211> 3265

<212> DNA

<213> Homo sapiens

<400> 378

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<212> PRT

<213> Homo sapiens

<400> 379

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Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn
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Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln
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Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro
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&lt;211&gt; 3877

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 380

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<400> 381

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Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	155	160	165
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	170	175	180
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	185	190	195
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	200	205	210
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	215	220	225
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	230	235	240
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	245	250	255
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Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	380	385	390
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 gcgaaggtga gcctctatct cgtgcc 26  
  
 <210> 384  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 384  
 cagcctacac gtattgagg 19  
  
 <210> 385  
 <211> 48  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

cagtcagtac aatcctggca taatatacgg ccaccatgat gcagtcgcc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

gaaagaatgt tgtggctgct cttttttctg gtgactgcc ttcagtctga 50  
actctgtcaa ccagggtgcag aaaatgcttt taaagtgaga cttagtatca 100  
gaacagctct gggagataaa gcatatgcct gggatacca tgaagaatac 150  
ctcttcaaag cgatggtagc ttctccatg agaaaagttc ccaacagaga 200  
agcaacagaa atttcccatg tctactttg caatgtaacc cagagggtat 250  
cattctgggt tgtggttaca gaccttcaa aaaatcacac cttctctgct 300  
gttgagggtc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350  
cttctttcta aatgaccaa ctctggaatt tttaaaaatc ctttccacac 400  
ttgcaccacc catggacca tctgtgccc tctggattat tatatttggt 450  
gtgatattt gcatacatat agttgcaatt gcaactactga ttttatcagg 500  
gatctggcaa cgtagaagaa agaacaaga accatctgaa gtggatgacg 550  
ctgaagataa gtgtgaaaac atgatacaca ttgaaaatgg catcccctct 600  
gatcccctgg acatgaaggg gggcatatta atgatgcctt catgacagag 650  
gatgagaggc tcacccctct ctgaagggtc gttgttctgc ttctctaaga 700  
aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750  
gcagatcata tattttgttt caccattctt cttttgtaat aaattttgaa 800  
tgtgtctgaa agtgaaaagc aatcaattat accaccaac accactgaaa 850  
tcataagcta tcacgactc aaaatattct aaaatatttt tctgacagta 900  
tagtgtataa atgtggtcat gtggtatttg tagttattga tttaagcatt 950  
tttagaata agatcaggca tatgtatata tttcacact tcaagacct 1000  
aaggaaaaa aaattttcca gtggagaata catataatat ggtgtagaaa 1050  
tcattgaaaa tggatccttt ttgacgatca cttatatcac tctgtatatg 1100  
actaagttaa caaaagttag aagtaattat tgtaaatgga tggataaaaa 1150  
tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200  
gttgattata tattttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300  
agtaataatc atctcttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387

<211> 212

<212> PRT

<213> Homo sapiens

<400> 387

Met Leu Trp Leu Leu Phe Phe Leu Val Thr Ala Ile His Ala Glu  
1 5 10 15

Leu Cys Gln Pro Gly Ala Glu Asn Ala Phe Lys Val Arg Leu Ser  
20 25 30

Ile Arg Thr Ala Leu Gly Asp Lys Ala Tyr Ala Trp Asp Thr Asn  
35 40 45

Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys  
50 55 60

Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys  
65 70 75

Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro  
80 85 90

Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile  
95 100 105

Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp  
110 115 120

Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro  
125 130 135

Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile  
140 145 150

Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly  
155 160 165

Ile Trp Gln Arg Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp  
170 175 180

Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly  
185 190 195

Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met  
200 205 210

Pro Ser

<210> 388

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 388

aactcaaaact cctctctctg ggaacacggt gtgcttgctc ctcccgaggt 50

gcccttgcca ggggtgttga gccctcggtc tgccccgtcc ggtctctggg 100  
 gccaaaggct ggtttccctc atgtatgcca agagctctac tcgtgcgggtg 150  
 cttctctctc ttggcataca gctcacagct ctttggccta tagcagctgt 200  
 ggaaatttat acctcccggtg tgctggaggc tgtaaatggg acagatgctc 250  
 ggttaaaatg cactttctcc agctttgccc ctgtgggtga tgctctaaca 300  
 gtgacctgga attttcgtcc tctagacggg ggacctgagc agtttgtatt 350  
 ctactaccac atagatccct tccaacccat gaggggcggt ttaaggacc 400  
 ggggtgtcttg gtaggggaat cctgagcggg acgatgcctc catccttctc 450  
 tggaaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500  
 cccacctgat gtttagggg tgatagggga gatccggctc agcgctcgtgc 550  
 acactgtacg cttctctgag atccacttcc tggtctgtgc cattggtctc 600  
 gctgtgcac tgatgatcat aatagtaatt gtagtggctc tcttccagca 650  
 ttaccggaaa aagcgatggg ccgaagagc tcataaagtg gtggagataa 700  
 aatcaaaaga agaggaaagg ctcaaccaag agaaaaaggt ctctgtttat 750  
 ttagaagaca cagactaaca atttttagatg gaagctgaga tgatttccaa 800  
 gaacaagaac cctagtattt ctggaagta atggaaactt ttctttggct 850  
 ttccagttg tgaccggtt tccaaccagt tctgcagcat attagattct 900  
 agacaagcaa caccctctg gagccagcac agtgctcctc catatcacca 950  
 gtcatacaca gctcatttat taaggtctta ttttaattca gagtgtaaat 1000  
 tttttcaagt gctcattagg ttttataaac aagaagctac atttttgccc 1050  
 ttaagacact acttacagtg ttatgacttg tatacacata tattggtatc 1100  
 aaaggggata aaagccaatt tgtctgttac atttcccttc acgtatttct 1150  
 ttttagcaga cttctgttac taaagttaat gtgtttactc tctttccttc 1200  
 ccacattctc aattaaaagg tgagctaagc ctccctcggtg tttctgatta 1250  
 acagtaaatc cttaattcaa actgttaaat gacattttta tttttatgtc 1300  
 tctccttaac tatgagacac atcttgtttt actgaatttc tttcaatatt 1350  
 ccaggtgata gattttgtgc g 1371

<210> 389

<211> 215

<212> PRT

<213> Homo sapiens

<400> 389

Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Leu Gly

1

5

10

15

Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr	
				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 390

ccgaggccat ctagaggcca gacg 24

<210> 391

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

acaggcagag ccaatggcca gacg 24

<210> 392  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 392  
 gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393  
 <211> 471  
 <212> DNA  
 <213> Homo sapiens

<400> 393  
 gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50  
 agcagtcctg gtactcttgg gagtttccat ctttctggtc tctgccaga 100  
 atccgacaac agctgctcca gctgacacgt atccagctac tggctcctgt 150  
 gatgatgaag ccctgatgac tgaaaccact gctgctgcaa ccaactgcgac 200  
 cactgctgct cctaccactg caaccacgcg tgcttctacc actgctogta 250  
 aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300  
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350  
 tattcatgct tcctgtgatt tcatccaact acttaccttg cctacgatat 400  
 cccotttato tctaatacgt ttattttctt tcaataaaaa aataactatg 450  
 agcaacataa aaaaaaaaaa a 471

<210> 394  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

<400> 394  
 Met Lys Phe Leu Ala Val Leu Val Leu Gly Val Ser Ile Phe  
 1 5 10 15  
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr  
 20 25 30  
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu  
 35 40 45  
 Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr  
 50 55 60  
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val  
 65 70 75  
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro  
 80 85 90

<210> 395  
 <211> 25

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 395  
gctccctgat ottcatgtca ccacc 25

<210> 396  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 396  
caggacaca ctctaccatt cgagg 26

<210> 397  
<211> 42  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 397  
ccatctttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398  
<211> 907  
<212> DNA  
<213> Homo sapiens

<400> 398  
ggactctgaa ggtoccaaagc agctgctgag gcccccaagg aagtgggtcc 50  
aaccttgac ccctaggggt ctggatttgc tggtaacaa gataacctga 100  
gggcaggacc ccatagggga atgetacctc ctgcccttcc acctgcctg 150  
gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200  
ggacgcagag gacgctcaca gactccagcc ctttgttacc gagaggacac 250  
ttggcaaggt ccacgatgg tccggagtcc acacacagac tggcggcagg 300  
gcaggagggg gacagttctg ttgtgcttgg ttggacagta agagggctct 350  
ggccagtcga ggggtggggg cggaactc cataaagaac cagaggggtct 400  
gggccccggc cacagagtca tctgccagc tcctctgctg ctggccagtg 450  
ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggtgggattt 500  
gcctgcgggc catggtccct gtctagggca goaattctca acctctctgc 550  
tctcaggacc ccaaagagct ttctattgat ctattgattt ttaccacatt 600  
agcaattaaa actgagaaat gggccgggca cgggtggctca cgctgtaatt 650

ccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700  
 caagaccagc ctggccaaca tggtagaacc ttgtctacta aaaatacaaa 750  
 aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800  
 gctgaggcag gaaaatcgct tgaaccagg aggcggagct tgcggtgagc 850  
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900  
 tcacaca 907

<210> 399

<211> 120

<212> PRT

<213> Homo sapiens

<400> 399

Met	Leu	Pro	Pro	Ala	Leu	Pro	Pro	Ala	Leu	Val	Phe	Thr	Val	Ala	
1				5					10					15	
Trp	Ser	Leu	Leu	Ala	Glu	Arg	Val	Ser	Trp	Val	Arg	Asp	Ala	Glu	
				20					25					30	
Asp	Ala	His	Arg	Leu	Gln	Pro	Phe	Val	Thr	Glu	Arg	Thr	Leu	Gly	
				35					40					45	
Lys	Val	Gln	Arg	Trp	Ser	Gly	Val	His	Thr	Gln	Thr	Gly	Gly	Arg	
				50					55					60	
Ala	Gly	Gly	Gly	Gln	Phe	Cys	Cys	Ala	Trp	Leu	Asp	Ser	Lys	Arg	
				65					70					75	
Val	Leu	Ala	Ser	Pro	Gly	Trp	Gly	Ala	Ala	Asn	Ser	Ile	Lys	Asn	
				80					85					90	
Gln	Arg	Val	Trp	Ala	Pro	Ala	Thr	Glu	Ser	Ser	Ala	Gln	Leu	Leu	
				95					100					105	
Cys	Cys	Trp	Pro	Val	Gly	Val	Ala	Arg	Gly	Gly	Ala	Leu	Cys	Gln	
				110					115					120	

<210> 400

<211> 893

<212> DNA

<213> Homo sapiens

<400> 400

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 ccggcctgcc tcagcgggcc ccatgggcgg ccagaaactg gcacagcatg 100  
 aggagctgac cctgctcttc catgggaccc tgcagctggg ccaggccctc 150  
 aacggtgtgt acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200  
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250  
 ggggccggga tgcagcccag gaacttcggg caagcctggt ggagactcag 300  
 atgaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350  
 gggggagggt gccaggcac agaaggtgct acgggacagc gtgcagcgcc 400



tagaagtcca gctgaggagc gctgggtgg gccctgcta cogagaattt 450  
 gaggctcttaa aggtctacgc tgacaagcag agccacatcc tatgggccct 500  
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550  
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600  
 atctgcctgg atggaactga ggaccaatca tegtgcgaagg aacacttcca 650  
 cgccccgtga ggcccctgtg caggaggagg ctgcctgttc actgggatca 700  
 gccaggcgcg cgggcccac ttctgagcac agagcagaga cagacgcagg 750  
 cggggacaaa ggcagaggat gtgcccctat tggggagggg tggaggaagg 800  
 acatgtacc tticcatgct acacaccct cattaagca ggtcgtggc 850  
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401  
 <211> 198  
 <212> PRT  
 <213> Homo sapiens

<400> 401  
 Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val  
 1 5 10 15  
 Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala  
 20 25 30  
 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu  
 35 40 45  
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu  
 50 55 60  
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu  
 65 70 75  
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu  
 80 85 90  
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu  
 95 100 105  
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala  
 110 115 120  
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val  
 125 130 135  
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu  
 140 145 150  
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala  
 155 160 165  
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln  
 170 175 180  
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

## Leu Pro Ala

&lt;210&gt; 402

&lt;211&gt; 1915

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 402

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 tgtaatttgc atcctggtga tcaccttact cctggaccag accaccagcc 100  
 acacatccag attaaaagcc aggaagcaca gcaaacgtcg agtgagagac 150  
 aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200  
 tgccctgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250  
 aagttcacaa gaaatgctac cttgcttcag aaggtttgaa gcatttccat 300  
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350  
 gaactccgac gaaatcaacg cctcccaaga ctatggtaaa aggagcctgc 400  
 caggtgtcaa tgacttttgg ctgggcatca atgacatggt cacgggaaggc 450  
 aagttttgtg acgtcaacgg aatcgctatc tcttctctca actggggaccg 500  
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550  
 cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600  
 atatgcgagt tcaccatccc taaataggtc tttctccaat gtgtcctcca 650  
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700  
 aatcataatt ttactttatt aaaaaattgc aacacaagat caatgtccat 750  
 agcaatatga tagcatcagc caattttgct aacacatttc ttggggattt 800  
 tgcccttctc ggggtatagg ggcacagaaa tattgatcca tgtgcacgca 850  
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtcttct 900  
 tcaattgtac aaaccaggtt tgttttcaaa aaatcacagt agcaatgcaa 950  
 ctcacactc tagaaaagca agcttaggct acctgaaaga ttttcccttg 1000  
 gaagtttagc gtatgtttga ctaacaaaaa ttccctacat cagagactct 1050  
 aggtgtcata taatccaaaa acttttcagc ctgttgctca ttctgtccca 1100  
 tgcctggcaat aataccttgt cagcccatca ccttatattt gaattgtctc 1150  
 atctcctggt gggacttgta tctgtctctc catatcagaa cacaaccctc 1200  
 tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250  
 ttggaagtgt ccagccgcaa ttgaaatga aatgacaagg tgtatatattg 1300

atcaattttc attccacca ttgcattaca acctctaact taaatgggta 1350  
 accctaagcg atatacaaga agcagattgc atgataaacg gaaatagaaa 1400  
 aaaagaacct acattttttt tgcttttagca tccttactct caccttttat 1450  
 gagattgaga gtggacttac atttcctttt ttacattttc gtatatttat 1500  
 ttttttttagc catcattata tgtttaagtc tattatgggc aaccaatctt 1550  
 tggaagctga aaactgaatt taaagaatgc tatcttgga aattgcatac 1600  
 gtctgtgcaa ttttttattc tgcttagtgc tattctgctt gttaactag 1650  
 attgtacaaa ataacttcac tgcttaatat caaattacaa agtttagact 1700  
 tggaggggaaa tgggcttttt agaagcaaac aattttaaat atattttgtt 1750  
 cttcaataaa atagtgttta aacattgaat gtgtttgtg aacaatatcc 1800  
 cactttgcaa actttaacta cacatgcttg gaattaagtt ttactgttt 1850  
 tcattgctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900  
 aaaaaaaaaa aaaaa 1915

<210> 403

<211> 206

<212> PRT

<213> Homo sapiens

<400> 403

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Val	Ile	Cys	Ile	Leu	Val	Ile	Thr	Leu	Leu	Asp	Gln	Thr	Thr		20	25	30	
Ser	His	Thr	Ser	Arg	Leu	Lys	Ala	Arg	Lys	His	Ser	Lys	Arg	Arg	35	40	45	
Val	Arg	Asp	Lys	Asp	Gly	Asp	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Leu	50	55	60	
Trp	Thr	Glu	Val	Asn	Ala	Leu	Lys	Glu	Ile	Gln	Ala	Leu	Gln	Thr	65	70	75	
Val	Cys	Leu	Arg	Gly	Thr	Lys	Val	His	Lys	Lys	Cys	Tyr	Leu	Ala	80	85	90	
Ser	Glu	Gly	Leu	Lys	His	Phe	His	Glu	Ala	Asn	Glu	Asp	Cys	Ile	95	100	105	
Ser	Lys	Gly	Gly	Ile	Leu	Val	Ile	Pro	Arg	Asn	Ser	Asp	Glu	Ile	110	115	120	
Asn	Ala	Leu	Gln	Asp	Tyr	Gly	Lys	Arg	Ser	Leu	Pro	Gly	Val	Asn	125	130	135	
Asp	Phe	Trp	Leu	Gly	Ile	Asn	Asp	Met	Val	Thr	Glu	Gly	Lys	Phe	140	145	150	
Val	Asp	Val	Asn	Gly	Ile	Ala	Ile	Ser	Phe	Leu	Asn	Trp	Asp	Arg				

155	160	165
Ala Gln Pro Asn Gly Gly Lys Arg Glu Asn Cys Val Leu Phe Ser		
170	175	180
Gln Ser Ala Gln Gly Lys Trp Ser Asp Glu Ala Cys Arg Ser Ser		
185	190	195
Lys Arg Tyr Ile Cys Glu Phe Thr Ile Pro Lys		
200	205	

<210> 404  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 404  
 cctggttatc cccaggaact ccgac 25

<210> 405  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 405  
 ctcttgctgc tgcgacaggc ctc 23

<210> 406  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 406  
 cgccctccaa gactatgcta aaaggagcct gccagggtgc aatgac 46

<210> 407  
 <211> 570  
 <212> DNA  
 <213> Homo sapiens

<400> 407  
 gcgaggaccg ggtataagaa gctctgtggc ctgtcccggg cagccgcagg 50  
 ttccccgcgc gccccgagcc ccgcgcacat gaagctcgcc gccctcctgg 100  
 ggctctgcgt ggocctgtcc tgcagctcgc ctgctgcttt cttagtgggc 150  
 tcggccaagc ctgtggccca gcctgtgcgt gcgctggagt cggcggcgga 200  
 ggcggggggc gggaccctgg ccaacccctc cggcaccctc aaccgcgtga 250  
 agctctcgtc gagcagcctg ggcaccccg tgaaccacct catagagggc 300  
 tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400  
 ctggagcatc tacacctgag gacaagacgc tgcccacccg cgagggtcta 450  
 aaaccccgcc ggggggagga ccgtccatcc ccttcccccg gccctctcta 500  
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 aaaaaaaaaa aaaaaaaaaa 570

<210> 408

<211> 104

<212> PRT

<213> Homo sapiens

<400> 408

Met	Lys	Leu	Ala	Ala	Leu	Leu	Gly	Leu	Cys	Val	Ala	Leu	Ser	Cys	1	5	10	15
Ser	Ser	Ala	Ala	Phe	Leu	Val	Gly	Ser	Ala	Lys	Pro	Val	Ala		20	25	30	
Gln	Pro	Val	Ala	Ala	Leu	Glu	Ser	Ala	Ala	Glu	Ala	Gly	Ala	Gly	35	40	45	
Thr	Leu	Ala	Asn	Pro	Leu	Gly	Thr	Leu	Asn	Pro	Leu	Lys	Leu	Leu	50	55	60	
Leu	Ser	Ser	Leu	Gly	Ile	Pro	Val	Asn	His	Leu	Ile	Glu	Gly	Ser	65	70	75	
Gln	Lys	Cys	Val	Ala	Glu	Leu	Gly	Pro	Gln	Ala	Val	Gly	Ala	Val	80	85	90	
Lys	Ala	Leu	Lys	Ala	Leu	Leu	Gly	Ala	Leu	Thr	Val	Phe	Gly		95	100		

<210> 409

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 409

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 agtctctctg tctccgtcct cctggcacag gtgtggctgg taccggctt 150  
 ggccccagct cctcagtcgc cagagacccc agcccctcag aaccagacca 200  
 gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250  
 agcgaggaga aggccggtga ggaagagaaa gcctggctga tggccagcag 300  
 gcagcagctt gccaaggaga cttaaaactt cggattcagc ctgtgcgcaa 350  
 agatctccat gaggcacgat ggcaacatgg tcttctctcc atttggcatg 400  
 tccttggcca tgacaggctt gatgctgggg gccacagggc cgactgaaac 450  
 ccagatcaag agagggtcc acttgaggc cctgaagccc accaagcccc 500

ggctcctgcc ttccctcttt aagggaactca gagagaccct ctcccgcaac 550  
 ctggaactgg gctctcaca ggggagtttt gcttctatcc acaaggattt 600  
 tgatgtcaaa gagactttct tcaatttato caagaggat tttgatacac 650  
 agtcgctgcc tatgaatttt cgaatgcct cacaggccaa aaggtcatg 700  
 aatcattaca ttaacaaaga gactcgggg aaaattccca aactgtttga 750  
 tgagattaat cctgaaacca aattaattct tgtggattac atctgtttca 800  
 aagggaaatg gttgaccca tttgacctg tcttcacga agtcgacact 850  
 ttccacctgg acaagtaca gaccattaag gtgoccatga tgtacgggac 900  
 aggcaagttt gctccacct ttgacaagaa ttttgttgt catgtcctca 950  
 aactgcctta ccaaggaaat gccaccatgc tgggtggtct catggagaaa 1000  
 atgggtgacc acctcgccct tgaagactac ctgaccacag acttggtgga 1050  
 gacatggctc agaaacatga aaaccagaaa catggaagtt tctttccga 1100  
 agttcaagct agatcagaag tatgagatgc atgagctgct tagcgagatg 1150  
 ggaatcagaa gaatcttctc accctttgct gaccttagtg aactctcagc 1200  
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 aagttgtatg aaggggcact gaggcagtg caggaatctt gtcagaaatt 1300  
 actgottatt ccacgcctcc tgtcatcaaa gtggaccggc catttctatt 1350  
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 tgaatccgac tctcctataa ttcaggacat gcataagcac ttcgtgctgt 1450  
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 atggcagggg agagtgttcc tttgttctt aactagtta ggggtgttctc 1550  
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 ttccatcaca tacataccta tgataaagtt taattataa attagcaca 1700  
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 aagtactca tgggcgagga gcatagacag tgtggagaca tgggcaagg 1850  
 ggagaattca catcctgggt gggacagagc aggcagatgc aagattccat 1900  
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 agactcgaca aagcaaaacc atggataagg gaggactact aaaaagcat 2050  
 taaattgata catatttttt aaaaaaaaa aaaaaaaaa 2089

<210> 410  
 <211> 444  
 <212> PRT  
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln
1				5					10					15
Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu
				20					25					30
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro
				35					40					45
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala
				50					55					60
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu
				65					70					75
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile
				80					85					90
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met
				95					100					105
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr
				110					115					120
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro
				125					130					135
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu
				140					145					150
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe
				155					160					165
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn
				170					175					180
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe
				185					190					195
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn
				200					205					210
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Phe	Phe	Asp	Glu	Ile	Asn
				215					220					225
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly
				230					235					240
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr
				245					250					255
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr
				260					265					270
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys
				275					280					285

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val  
 290 295 300  
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr  
 305 310 315  
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr  
 320 325 330  
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys  
 335 340 345  
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile  
 350 355 360  
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg  
 365 370 375  
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val  
 380 385 390  
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile  
 395 400 405  
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe  
 410 415 420  
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu  
 425 430 435  
 Gly Arg Val Val Asn Pro Thr Leu Leu  
 440

<210> 411

<211> 636

<212> DNA

<213> HOMO sapiens

<400> 411

ctgggatcag ccaactgcagc tccctgagca ctctctacag agacgcggac 50  
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 tgtggggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150  
 gtcaaacact ggccctcaga gcaggaccca gagaaggcct ggggcgcccc 200  
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 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300  
 agggggcccca tccttcacag caccagggcc tggatggaga ccgaggacac 350  
 cctgggccgt gtctgagtc ccgagccoga coactgacagc ctgtaccacc 400  
 ctccgcctga ggaggaccag ggcgaggaga ggcccgggtt gtgggtgatg 450  
 ccaaataccc aggtgctcct gggaccggag gaagaccaag accacatcta 500  
 ccacccccag tagggctcca ggggccatca ctgccccgcg cctgtcccaa 550  
 ggccaggct gttgggactg ggaccctccc tacctgccc cagctagaca 600



aataaaccccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met	Arg	Arg	Leu	Leu	Leu	Val	Thr	Ser	Leu	Val	Val	Val	Leu	Leu
1				5					10					15
Trp	Glu	Ala	Gly	Ala	Val	Pro	Ala	Pro	Lys	Val	Pro	Ile	Lys	Met
				20					25					30
Gln	Val	Lys	His	Trp	Pro	Ser	Glu	Gln	Asp	Pro	Glu	Lys	Ala	Trp
				35					40					45
Gly	Ala	Arg	Val	Val	Glu	Pro	Pro	Glu	Lys	Asp	Asp	Gln	Leu	Val
				50					55					60
Val	Leu	Phe	Pro	Val	Gln	Lys	Pro	Lys	Leu	Leu	Thr	Thr	Glu	Glu
				65					70					75
Lys	Pro	Arg	Gly	Gln	Gly	Arg	Gly	Pro	Ile	Leu	Pro	Gly	Thr	Lys
				80					85					90
Ala	Trp	Met	Glu	Thr	Glu	Asp	Thr	Leu	Gly	Arg	Val	Leu	Ser	Pro
				95					100					105
Glu	Pro	Asp	His	Asp	Ser	Leu	Tyr	His	Pro	Pro	Pro	Glu	Glu	Asp
				110					115					120
Gln	Gly	Glu	Glu	Arg	Pro	Arg	Leu	Trp	Val	Met	Pro	Asn	His	Gln
				125					130					135
Val	Leu	Leu	Gly	Pro	Glu	Glu	Asp	Gln	Asp	His	Ile	Tyr	His	Pro
				140					145					150
Gln														

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

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aggagctctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100  
caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150  
tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200  
gtctccatct ctgccagaa gctgcaagga aatcaaagac gaatgtccta 250  
gtgcatttga tggcctgtat tttctccgca ctgagaatgg tggtatctac 300  
cagaccttct gtgacatgac ctctgggggt ggcggtgga cctgtgtggtc 350  
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450  
 tgggccaaact acaacacott tggtatctgca gagggcgcca cgagcgatga 500  
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550  
 ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600  
 ctgaggtacc gcacggacac tggcttcttc cagacactgg gacataatct 650  
 gtttggcatc taccagaaat atccagtga atattggagaa ggaaagtgtt 700  
 ggactgacaa cgcccgggtg atccctgtgg tctatgattt tggcgacgcc 750  
 cagaaaacag catcttatta ctaccctat ggccagcggg aattcaactgc 800  
 gggatttgtt cagttcaggg tatttaataa cgagagagca gccaacgcct 850  
 tgtgtgctgg aatgagggtc accgatgta acaactgagca tcaactgcatt 900  
 ggtggaggag gatactttcc agaggccagt cccagcagt gtggagattt 950  
 ttctggtttt gattggagtg gatatggaac tcatgttgtt tacagcagca 1000  
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050  
 tgtggggagg aaccagacc tctctccca accatgagat cccaaggatg 1100  
 gagaacaact taccagtag ctagaatgtt aatggcagaa gaaaaacaa 1150  
 taatcatat tgactcaaga aaaaaa 1176

<210> 414  
 <211> 313  
 <212> PRT  
 <213> Homo sapiens

<400> 414

Met	Asn	Gln	Leu	Ser	Phe	Leu	Leu	Phe	Leu	Ile	Ala	Thr	Thr	Arg
1				5					10					15
Gly	Trp	Ser	Thr	Asp	Glu	Ala	Asn	Thr	Tyr	Phe	Lys	Glu	Trp	Thr
				20					25					30
Cys	Ser	Ser	Ser	Pro	Ser	Leu	Pro	Arg	Ser	Cys	Lys	Glu	Ile	Lys
				35					40					45
Asp	Glu	Cys	Pro	Ser	Ala	Phe	Asp	Gly	Leu	Tyr	Phe	Leu	Arg	Thr
				50					55					60
Glu	Asn	Gly	Val	Ile	Tyr	Gln	Thr	Phe	Cys	Asp	Met	Thr	Ser	Gly
				65					70					75
Gly	Gly	Gly	Trp	Thr	Leu	Val	Ala	Ser	Val	His	Glu	Asn	Asp	Met
				80					85					90
Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly
				95					100					105
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr
				110					115					120
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys

125	130	135
Asn Pro Gly Tyr	Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile Trp
140	145	150
His Val Pro Asn	Lys Ser Pro Met Gln	His Trp Arg Asn Ser Ser
155	160	165
Leu Leu Arg Tyr	Arg Thr Asp Thr Gly	Phe Leu Gln Thr Leu Gly
170	175	180
His Asn Leu Phe	Gly Ile Tyr Gln Lys	Tyr Pro Val Lys Tyr Gly
185	190	195
Glu Gly Lys Cys	Trp Thr Asp Asn Gly	Pro Val Ile Pro Val Val
200	205	210
Tyr Asp Phe Gly	Asp Ala Gln Lys Thr	Ala Ser Tyr Tyr Ser Pro
215	220	225
Tyr Gly Gln Arg	Glu Phe Thr Ala Gly	Phe Val Gln Phe Arg Val
230	235	240
Phe Asn Asn Glu	Arg Ala Ala Asn Ala	Leu Cys Ala Gly Met Arg
245	250	255
Val Thr Gly Cys	Asn Thr Glu His His	Cys Ile Gly Gly Gly Gly
260	265	270
Tyr Phe Pro Glu	Ala Ser Pro Gln Gln	Cys Gly Asp Phe Ser Gly
275	280	285
Phe Asp Trp Ser	Gly Tyr Gly Thr His	Val Gly Tyr Ser Ser Ser
290	295	300
Arg Glu Ile Thr	Glu Ala Ala Val Leu	Phe Tyr Arg
305	310	

<210> 415

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 415

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 tcggcgcgcg aggtgcttgg gccgcgctgc tcttggggag gctgcagggtg 150  
 cttagcgctgc tgggggcccgc ccatgaaagc gcagccatgg cggtcatctgc 200  
 aaacatagag aattctgggc ttccacacaa ctccagtgtc aactcaacag 250  
 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300  
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350  
 caccaccatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400  
 tctcaacaaa tatgacttct accaccttaa agtctacacc caaaacaaca 450  
 agtgtttacc agaacacatc tcagatatca acatccacaa tgaccgtaac 500

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaaaca 550  
 ctatgcattc tgaagcaaag aaaggatcaa aatttgatc tgggagcttt 600  
 gttggtggtg ttgtattaac gctgggagtt ttatctattc tttacattgg 650  
 atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700  
 aacatgatgc catcatttaa ggaatccat ggaccaagga tggaatacag 750  
 attgatgctg ccctatcaat taattttggt ttattaatag tttaaaaca 800  
 tattctcttt ttgaaaatag tataaacagg ccatgcataat aatgtacagt 850  
 gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900  
 tgaataaac atctggatct tatagacctc tcatacaatg gttttagcaa 950  
 gttcatagta agacaaaca gtctatctt tttttttggt ctggggtggg 1000  
 ggcattggtc acatatgacc agtaattgaa agacgtcctc actgaaagac 1050  
 agaatgccat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100  
 tttgggtatc tttgttagct cacataaaga acttcagtgc ttttcagagc 1150  
 tggatatatc ttaattacta atgcoacaca gaaattatac aatcaaaacta 1200  
 gatctgaagc ataatttaag aaaaacatca acattttttg tgcttttaac 1250  
 tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416

<211> 208

<212> PRT

<213> Homo sapiens

<400> 416

Met	Gly	Leu	Gly	Ala	Arg	Gly	Ala	Trp	Ala	Ala	Leu	Leu	Leu	Gly
1				5					10					15
Thr	Leu	Gln	Val	Leu	Ala	Leu	Leu	Gly	Ala	Ala	His	Glu	Ser	Ala
				20					25					30
Ala	Met	Ala	Ala	Ser	Ala	Asn	Ile	Glu	Asn	Ser	Gly	Leu	Pro	His
				35					40					45
Asn	Ser	Ser	Ala	Asn	Ser	Thr	Glu	Thr	Leu	Gln	His	Val	Pro	Ser
				50					55					60
Asp	His	Thr	Asn	Glu	Thr	Ser	Asn	Ser	Thr	Val	Lys	Pro	Pro	Thr
				65					70					75
Ser	Val	Ala	Ser	Asp	Ser	Ser	Asn	Thr	Thr	Val	Thr	Thr	Met	Lys
				80					85					90
Pro	Thr	Ala	Ala	Ser	Asn	Thr	Thr	Thr	Pro	Gly	Met	Val	Ser	Thr
				95					100					105
Asn	Met	Thr	Ser	Thr	Thr	Leu	Lys	Ser	Thr	Pro	Lys	Thr	Thr	Ser
				110					115					120
Val	Ser	Gln	Asn	Thr	Ser	Gln	Ile	Ser	Thr	Ser	Thr	Met	Thr	Val

	125		130		135
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr Ile			
	140		145		150
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe Asp			
	155		160		165
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val Leu			
	170		175		180
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg Gly			
	185		190		195
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200		205		

<210> 417

<211> 1728

<212> DNA

<213> Homo sapiens

<400> 417

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gcgatggcga ccctgtgggg aggccttctt cggcttggtc ccttgctcag 150

cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgagc ctgctcagac 200

ccgccaaaga ttctgaggat gtcagatgta aatgatctc ccctccctat 250

aaagaaaatt ctgggcatat ttataataag aacatatctc agaaagattg 300

tgattgcctt catgttgtgg agcccatgcc tgtgcggggg cctgatgtag 350

aagcatactg tctacgctgt gaatgcaaat atgaagaaag aagctctgtc 400

acaatcaagg ttaccattat aatttatctc tccatttttg gccttctact 450

tctgtacatg gtatatctta ctctgggtga gccatactg aagaggcgcc 500

tcttttgaca tgcacagttg atacagagtg atgatgatat tggggatcac 550

cagccttttg caaatgcaca cgatgtgcta gcccgtccc gcagtcgagc 600

caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650

tccaagagca gcgaaagtct gtctttgacc ggcattgtgt cctcagctaa 700

ttgggaattg aattcaagggt gactagaaag aaacaggcag acaactggaa 750

agaactgact ggggttttgct gggtttcatt ttaatacctt gttgatttca 800

ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850

ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900

aaagtacgcc aataagtcct ttccctatttg tgacttttac taataaaaaa 950

aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat ttctcagggtt 1050  
 ttgtgtgttg ttgttttttg ttgtttgtt ttggtgggag agggggagga 1100  
 tgcctgggaa gtggttaaca acttttttca agtcacttta ctaaacaaac 1150  
 ttttgtaaat agaccttacc ttctattttc gagtttcatt tatattttgc 1200  
 agtgtagcca gccctcatca agagctgact tactcatttg acttttgcac 1250  
 tgaactgtatt atctgggtat ctgctgtgtc tgcacttcac ggtaaacggg 1300  
 atctaaaaat cctgggtggt ttccacaaaa agcagatttt ottcatgtac 1350  
 tgtgatgtct gatgcaatgc atoctagaac aaactggcca tttgctagtt 1400  
 tactctaaag actaaacata gtcttgggtg gtgtggtctt actcatcttc 1450  
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500  
 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550  
 tcagcatttc cggctgtggt gagaggcagc tgtttgagct ccaatatgtg 1600  
 cagctttgaa ctagggtctg ggttgggtt gccctctctg aaaggtctaa 1650  
 ccattattgg ataactggct tttttcttcc tatgtctctt ttggaatgta 1700  
 acaataaaaa taatttttga aacatcaa 1728

<210> 418

<211> 198

<212> PRT

<213> Homo sapiens

<400> 418

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Ser	Leu	Ser	Cys	Leu	Ala	Leu	Ser	Val	Leu	Leu	Leu	Ala	Gln	Leu
				20					25					30
Ser	Asp	Ala	Ala	Lys	Asn	Phe	Glu	Asp	Val	Arg	Cys	Lys	Cys	Ile
				35					40					45
Cys	Pro	Pro	Tyr	Lys	Glu	Asn	Ser	Gly	His	Ile	Tyr	Asn	Lys	Asn
				50					55					60
Ile	Ser	Gln	Lys	Asp	Cys	Asp	Cys	Leu	His	Val	Val	Glu	Pro	Met
				65					70					75
Pro	Val	Arg	Gly	Pro	Asp	Val	Glu	Ala	Tyr	Cys	Leu	Arg	Cys	Glu
				80					85					90
Cys	Lys	Tyr	Glu	Glu	Arg	Ser	Ser	Val	Thr	Ile	Lys	Val	Thr	Ile
				95					100					105
Ile	Ile	Tyr	Leu	Ser	Ile	Leu	Gly	Leu	Leu	Leu	Tyr	Met	Val	
				110					115					120
Tyr	Leu	Thr	Leu	Val	Glu	Pro	Ile	Leu	Lys	Arg	Arg	Leu	Phe	Gly
				125					130					135

His Ala Gln Leu Ile Gln Ser Asp Asp Asp Ile Gly Asp His Gln  
140 145 150

Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg  
155 160 165

Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys  
170 175 180

Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val  
185 190 195

Val Leu Ser

<210> 419  
<211> 681  
<212> DNA  
<213> Homo sapiens

<400> 419  
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tcgctctggc ttctgggctt gtctgggctc tgcgtgtgct gctgcccaag 100  
gccttctctg ccgcgggaa gcgcgaggag ccgcgccga cactgaagg 150  
aaaattgggc cgatttccac ctatgatgca tcatcaccag gcacctcag 200  
atggccagac tctctgggct cgtttccaga ggtctcacct tgccgaggca 250  
tttgcaaaag ccaaaggatc aggtggagggt gctggaggag gaggtagtgg 300  
aagaggctctg atggggcaga ttattccaat ctacgggtttt gggatttttt 350  
tatatatata gtacattcta tttaaggtaa gtagaatcat cctaatacata 400  
ttacatcaat gaaaaatctaa tatggcgata aaaatcattg totacattaa 450  
aactttctat agttcataaa attatttcaa atccatcatc tctttaaatc 500  
ctgcctcctc ttcatgagggt acttaggata gccattattt cagtttcaca 550  
taagaatggt tactcaatgt ttaagtgttt tgcccaaaaa ttcacaacta 600  
acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650  
gagtgtatata attcaatgca ctccctgcc a 681

<210> 420  
<211> 128  
<212> PRT  
<213> Homo sapiens

<400> 420  
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1 5 10 15  
Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg  
20 25 30  
Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly  
35 40 45

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly  
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala  
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly  
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe  
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg  
110 115 120

Ile Ile Leu Ile Ile Leu His Gln  
125

<210> 421

<211> 1630

<212> DNA

<213> Homo sapiens

<400> 421

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aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150

ttgaatgttt ccccgccctga gctaacagtc catgtgggtg attcagctct 200

gatgggagtgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250

actggactct gtcaccagga gagcagccca aggacgaata tgtgctatac 300

tattactcca atctcagtgt gccattggg cgcttccaga accgcgtaca 350

cttgatgggg gacatottat gcaatgatgg ctctctcctg ctccaagatg 400

tgcaagaggc tgaccagga acctatatct gtgaaatccg cctcaaaggg 450

gagagccagg tgttcaagaa ggcggtggta ctgcatgtgc ttccagagga 500

gccccaaag ctcattggtcc atgtgggtgg attgattcag atgggatgtg 550

ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatatatt 600

tcaggacggc gcgcaaaagga ggagattgta ttctgttact accacaaact 650

caggatgtct gtggagtact ccagagctg gggccacttc cagatcgtg 700

tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750

ggagtggagg agtcagatgg aggaactac acctgcagta tccacctagg 800

gaacctggtg ttcaagaaaa ccattgtgct gcatgtcagc ccggaagagc 850

ctcgaacct ggtgaccccg gcagccctga ggcctctggt cttgggtggt 900

aatcagttgg tgatcattgt gggaattgtc tgtgccacaa tctgtctgct 950

ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagatttcag 1000



tgaattctac agtcttggtg aagaacacga agaagactaa tccagagata 1050  
 aaagaaaaac cctgccattt tgaaagatgt gaaggggaga aacacattta 1100  
 ctccccaata attgtacggg aggtgatcga ggaagaagaa ccaagtga 1150  
 aatcagagcg cactacatg accatgcacc cagtttggcc ttctctgagg 1200  
 tcagatcgga acaactcact tgaaaaaaag tcaggtgggg gaatgccaaa 1250  
 aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300  
 ggtggagact ctctctgtg tgtgtcctgg gccactctac cagtgatttc 1350  
 agactcccg tctcccagct gtctctctgt ctcatgtttt ggtcaataca 1400  
 ctgaagatgg agaatttggg gcctggcaga gagactggac agctctggag 1450  
 gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500  
 aacttggccc tgggaaccag gctgagctga gtggcctcaa accccccgtt 1550  
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 gaatcagaga taaaaaccaa cccaaatcaa 1630

<210> 422

<211> 394

<212> PRT

<213> Homo sapiens

<400> 422

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Tyr	Ser	Leu	Gly	Leu	Asn	Asp	Leu	Asn	Val	Ser	Pro	Pro	Glu	Leu	30
				20					25						
Thr	Val	His	Val	Gly	Asp	Ser	Ala	Leu	Met	Gly	Cys	Val	Phe	Gln	45
				35					40						
Ser	Thr	Glu	Asp	Lys	Cys	Ile	Phe	Lys	Ile	Asp	Trp	Thr	Leu	Ser	60
				50					55						
Pro	Gly	Glu	His	Ala	Lys	Asp	Glu	Tyr	Val	Leu	Tyr	Tyr	Tyr	Ser	75
				65					70						
Asn	Leu	Ser	Val	Pro	Ile	Gly	Arg	Phe	Gln	Asn	Arg	Val	His	Leu	90
				80					85						
Met	Gly	Asp	Ile	Leu	Cys	Asn	Asp	Gly	Ser	Leu	Leu	Leu	Gln	Asp	105
				95					100						
Val	Gln	Glu	Ala	Asp	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu	120
				110					115						
Lys	Gly	Glu	Ser	Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val	135
				125					130						
Leu	Pro	Glu	Glu	Pro	Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	150
				140					145						
Ile	Gln	Met	Gly	Cys	Val	Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val	

155	160	165
Thr Lys Val Glu Trp Ile Phe Ser Gly	Arg Arg Ala Lys Glu Glu	
170	175	180
Ile Val Phe Arg Tyr Tyr His Lys Leu	Arg Met Ser Val Glu Tyr	
185	190	195
Ser Gln Ser Trp Gly His Phe Gln Asn	Arg Val Asn Leu Val Gly	
200	205	210
Asp Ile Phe Arg Asn Asp Gly Ser Ile	Met Leu Gln Gly Val Arg	
215	220	225
Glu Ser Asp Gly Gly Asn Tyr Thr Cys	Ser Ile His Leu Gly Asn	
230	235	240
Leu Val Phe Lys Lys Thr Ile Val Leu	His Val Ser Pro Glu Glu	
245	250	255
Pro Arg Thr Leu Val Thr Pro Ala Ala	Leu Arg Pro Leu Val Leu	
260	265	270
Gly Gly Asn Gln Leu Val Ile Ile Val	Gly Ile Val Cys Ala Thr	
275	280	285
Ile Leu Leu Leu Pro Val Leu Ile Leu	Ile Val Lys Lys Thr Cys	
290	295	300
Gly Asn Lys Ser Ser Val Asn Ser Thr	Val Leu Val Lys Asn Thr	
305	310	315
Lys Lys Thr Asn Pro Glu Ile Lys Glu	Lys Pro Cys His Phe Glu	
320	325	330
Arg Cys Glu Gly Glu Lys His Ile Tyr	Ser Pro Ile Ile Val Arg	
335	340	345
Glu Val Ile Glu Glu Glu Pro Ser Glu	Lys Ser Glu Ala Thr	
350	355	360
Tyr Met Thr Met His Pro Val Trp Pro	Ser Leu Arg Ser Asp Arg	
365	370	375
Asn Asn Ser Leu Glu Lys Lys Ser Gly	Gly Gly Met Pro Lys Thr	
380	385	390
Gln Gln Ala Phe		

<210> 423

<211> 963

<212> DNA

<213> Homo sapiens

<400> 423

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ctctgagctc agttgcagta ctcggaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcggaac cagctcttgt ctcggttggc 250  
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 gtgcgtgggg atggttgtcg ggctgggtgc tctggggatt tggctgtgca 350  
 tgcagcgcaa ttacctacaa gatgagaatg aaaatcgcac aggaactctg 400  
 caacaattag caaagcgctt ctgtcaatat gtggtaaaaa aatcagaact 450  
 aaagggcact ttcaaaggtc ataaatgcag cccctgtgac acaaactgga 500  
 gatattatgg agatagctgc tatgggttct tcaggcaciaa cttacatagg 550  
 gaagagagta agcagtactg cactgacatg aatgctactc tcctgaagat 600  
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650  
 gttgggtcgg attatctcgc cagaagtoga atgaggtctg gaagtgggag 700  
 gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750  
 aggaaatatg aattgtgctt attttcataa tgggaaaaatg caccctacct 800  
 tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850  
 aaggtggacc aactacotta atgcaaagag gtggacagga taacacagat 900  
 aagggcttta ttgtacaata aaagatatgt atgaatgcat cagtactgta 950  
 aaaaaaaaaa aaa 963

<210> 424

<211> 229

<212> PRT

<213> Homo sapiens

<400> 424

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Lys	Pro	Ala	Leu	Val	Ser	Val	Gly	Pro	Ala	Ser	Ser	Ser	Trp	Trp
				20					25					30
Arg	Val	Met	Ala	Leu	Ile	Leu	Leu	Ile	Leu	Cys	Val	Gly	Met	Val
				35					40					45
Val	Gly	Leu	Val	Ala	Leu	Gly	Ile	Trp	Ser	Val	Met	Gln	Arg	Asn
				50					55					60
Tyr	Leu	Gln	Asp	Glu	Asn	Glu	Asn	Arg	Thr	Gly	Thr	Leu	Gln	Gln
				65					70					75
Leu	Ala	Lys	Arg	Phe	Cys	Gln	Tyr	Val	Val	Lys	Gln	Ser	Glu	Leu
				80					85					90
Lys	Gly	Thr	Phe	Lys	Gly	His	Lys	Cys	Ser	Pro	Cys	Asp	Thr	Asn
				95					100					105
Trp	Arg	Tyr	Tyr	Gly	Asp	Ser	Cys	Tyr	Gly	Phe	Phe	Arg	His	Asn
				110					115					120
Leu	Thr	Trp	Glu	Glu	Ser	Lys	Gln	Tyr	Cys	Thr	Asp	Met	Asn	Ala

125	130	135
Thr Leu Leu Lys	Ile Asp Asn Arg Asn	Ile Val Glu Tyr Ile Lys
140	145	150
Ala Arg Thr His	Leu Ile Arg Trp Val	Gly Leu Ser Arg Gln Lys
155	160	165
Ser Asn Glu Val	Trp Lys Trp Glu Asp	Gly Ser Val Ile Ser Glu
170	175	180
Asn Met Phe Glu	Phe Leu Glu Asp Gly	Lys Gly Asn Met Asn Cys
185	190	195
Ala Tyr Phe His	Asn Gly Lys Met His	Pro Thr Phe Cys Glu Asn
200	205	210
Lys His Tyr Leu	Met Cys Glu Arg Lys	Ala Gly Met Thr Lys Val
215	220	225
Asp Gln Leu Pro		

<210> 425  
 <211> 24  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 425  
 tgcagccct gtgacacaaa ctgg 24

<210> 426  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 426  
 ctgagataac cgagccatcc tccac 26

<210> 427  
 <211> 49  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 427  
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<210> 428  
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 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 428  
ccaccaatgg cagccccacc t 21

<210> 429  
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<220>  
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<400> 429  
gactgccctc cctgcc a 17

<210> 430  
<211> 24  
<212> DNA  
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<220>  
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<400> 430  
caaaaagcct ggaagtcttc aaag 24

<210> 431  
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<212> DNA  
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<220>  
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<400> 431  
cagctggact gcaggtgcta 20

<210> 432  
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<220>  
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<400> 432  
cagtgagcac agcaagtgtc ct 22

<210> 433  
<211> 28  
<212> DNA  
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<220>  
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<400> 433  
ggccacctcc ttgagtcttc agttccct 28

<210> 434  
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<212> DNA  
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<220>  
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 <400> 434  
 caactactgg ctaaagctgg tgaa 24  
  
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 <400> 435  
 cctttctgta tagtgatag ccaatga 27  
  
 <210> 436  
 <211> 24  
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 <400> 436  
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 <210> 437  
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 <210> 438  
 <211> 19  
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 <400> 438  
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 <210> 439  
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 <210> 440  
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<212> DNA  
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 <210> 442  
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 <210> 443  
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<210> 446  
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 <210> 449  
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 <400> 449  
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 <210> 450  
 <211> 19  
 <212> DNA  
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 <400> 450  
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 <210> 451  
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<400> 451  
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 <210> 452  
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 <223> Synthetic oligonucleotide probe  
  
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 <210> 455  
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 <210> 457  
 <211> 24  
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 <400> 457  
 tgcacctaga tgtccccagc accc 24  
  
 <210> 458  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <400> 458  
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 <210> 459  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <400> 459  
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 <210> 460  
 <211> 24  
 <212> DNA  
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 <400> 460  
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 <210> 461  
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 <400> 461  
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 <210> 462  
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 <220>  
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 <400> 462  
 caaatataag tacccatcag gagagaa 27  
  
 <210> 463  
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<212> DNA  
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 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 463  
 aagttgctaa atatatacat tatctgcgcc aagtcca 37  
  
 <210> 464  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 464  
 gtgctgcccc caattcatga 20  
  
 <210> 465  
 <211> 26  
 <212> DNA  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 465  
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 <210> 466  
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 <220>  
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 <400> 466  
 actctctgca cccacagtc accactatct c 31  
  
 <210> 467  
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<210> 469  
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 <400> 470  
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 <210> 474  
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 <223> Synthetic oligonucleotide probe

<400> 474  
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<210> 475  
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<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 475  
accgcctacc gctgtgccca 20

<210> 476  
<211> 23  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 476  
cagtaaaacc acaggctgga tt 23

<210> 477  
<211> 24  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 477  
cctgagagca agaaggttga gaat 24

<210> 478  
<211> 22  
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<223> Synthetic oligonucleotide probe

<400> 478  
tagacaggga ccatggcccg ca 22

<210> 479  
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<210> 480  
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 <400> 482  
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 <210> 483  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 483  
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 <210> 484  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 484  
 gtggtcaggg cagatccttt 20  
  
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 ggggccctga cagtgtt 17

<210> 492  
<211> 26  
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<220>  
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<210> 493  
<211> 17  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 493  
gtgggcagcg tcttgtc 17

<210> 494  
<211> 1231  
<212> DNA  
<213> Homo Sapien

<400> 494  
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cagcccgcgc gggagccgga ccgccgcgcg aggagctcgg acgcatgct 150  
gagccccctc ctttctgtaa gcccgagtgc ggagaagccc gggcaaacgc 200  
aggctaagga gaccaaagcg gcgaagtcgc gagacagcgg acaagcagcg 250  
gaggagaagg aggaggaggc gaaccagag aggggcagca aaagaagcgg 300  
tgggtggtggg cgtcgtggcc atggcgccgg ctatcgccag ctcgctcctc 350  
cgtcagaaga ggcaagcccg cgagcgcgag aaatccaacg cctgcaaagt 400  
tgtcagcagc ccagcacaag gcaagaccag ctgcgacaaa aacaagttaa 450  
atgtcttttc ccgggtcaaa ctcttcggct ccaagaagag gcgcagaaga 500  
agaccagagc ctcagcttaa gggatatgtt accaagctat acagccgaca 550  
aggctaccac ttgcagctgc aggcggatgg aaccattgat ggcaccaaag 600  
atgaggacag cacttacact ctgtttaacc tcatccctgt gggctcgcga 650  
gtgggtggta tccaaggagt tcaaaccaag ctgtacttgg caatgaacag 700  
tgaggggatac ttgtacacct cggaactttt cacacctgag tgcaaatcca 750  
aagaatcagt gtttgaaaat tattatgtga catattcatc aatgatatac 800  
cgtcagcagc agtcaggccg aggggtgtat ctgggtctga acaagaaggg 850  
agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900



050711-11101

<213> Homo Sapien

Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys

Ser Arg Ser Val Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser  
230 235 240

His Asn Glu Ser Thr  
245

<210> 496

<211> 1471

<212> DNA

<213> Homo Sapien

<400> 496

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gacatggggg ggacttggtg aaaaaggtat tatccagcca gagggctctg 100  
gagccctgtc ttactgaacc tgggcaacct ggatattctg agacatattt 150  
tggggggatt tcagtgaaaa aagtggggga tccctccat ttagagtgtg 200  
gcaaagggaa aaacaccaag gttgggttcc ttctgacat tggcagtgcc 250  
ccagtagggg tgggatgagc gaatatcc aaagctaaag tccacacccc 300  
tgtagattac aagagtggat ttggcaggag tgtgccccaa aatacagtgg 350  
aaaggtgcct gaagatattt aaaccacgtc ttgaaattt agtgggtctt 400  
ggctttggga taggtgaagt gaggacagac actggagagg agggaaaggg 450  
gacgttttca ataggaggca aaactcgagg gtgggatcca ctgaggagta 500  
cataggctgc tggatctggt ggagccagca ctgggccccc ggggtgtaac 550  
tggctctgtg ggaggggggt acgtgagggg ggggtctggg gcttacctc 600  
aggctctgtg ggtggggcag cgagtcgggg cctgagcgtc aagagcatgc 650  
cctagtgaac gggctcctct gggggagccc agcgcgtcc gggcgctctc 700  
cggtttgggg gtgtctctc ccggggcgct atggcgcgcc tggccagtag 750  
cctgatccgg cagaagcggg aggtcccgca gccggggggc agccggccgg 800  
tgtcgcgcca gcggcgctg tgtccccgcg gcaccaagtc cctttgccag 850  
aagcagctcc tcctctgtct gtccaagggt cgactgtgct gggggcggcc 900  
cgcgcggcgc gaccgcggcc cggagcctca gctcaaagtc atcgtacca 950  
aactgttctg ccgccagggt ttctacctcc aggcgaatcc cgacggaagc 1000  
atccaggcca cccagaggga taccagctcc ttcaccactc tcaacctgat 1050  
ccctgtgggc ctccgtgtgg taccatcca gagcgccaag ctgggtcact 1100  
acatggccat gaatgctgag ggactgctct acagttcgcc gcatttcaca 1150  
gctgagtgtc gctttaagga gtgtgtcttt gagaattact acgtctctga 1200  
cgctctgct ctctaccgcc agcgtcgttc tggccggggc tggtaacctg 1250

gcctggacaa ggagggccag gtcataagag gaaaccgagt taagaagacc 1300  
 aaggcagctg cccactttct gcccaagctc ctggaggtgg ccatgtacca 1350  
 ggagcctctt ctccacagtg tccccgaggc ctcccccttc agtccccctg 1400  
 cccctgaaa ttagtcctt ggactggagg ttcctgcac tccagtgag 1450  
 ccagccacca ccacaacctg t 1471

<210> 497

<211> 225

<212> PRT

<213> Homo Sapien

<400> 497

Met	Ala	Ala	Leu	Ala	Ser	Ser	Leu	Ile	Arg	Gln	Lys	Arg	Glu	Val	1	5	10	15
Arg	Glu	Pro	Gly	Gly	Ser	Arg	Pro	Val	Ser	Ala	Gln	Arg	Arg	Val	20	25	30	
Cys	Pro	Arg	Gly	Thr	Lys	Ser	Leu	Cys	Gln	Lys	Gln	Leu	Leu	Ile	35	40	45	
Leu	Leu	Ser	Lys	Val	Arg	Leu	Cys	Gly	Gly	Arg	Pro	Ala	Arg	Pro	50	55	60	
Asp	Arg	Gly	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu	65	70	75	
Phe	Cys	Arg	Gln	Gly	Phe	Tyr	Leu	Gln	Ala	Asn	Pro	Asp	Gly	Ser	80	85	90	
Ile	Gln	Gly	Thr	Pro	Glu	Asp	Thr	Ser	Ser	Phe	Thr	His	Phe	Asn	95	100	105	
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Thr	Ile	Gln	Ser	Ala	Lys	110	115	120	
Leu	Gly	His	Tyr	Met	Ala	Met	Asn	Ala	Glu	Gly	Leu	Leu	Tyr	Ser	125	130	135	
Ser	Pro	His	Phe	Thr	Ala	Glu	Cys	Arg	Phe	Lys	Glu	Cys	Val	Phe	140	145	150	
Glu	Asn	Tyr	Tyr	Val	Leu	Tyr	Ala	Ser	Ala	Leu	Tyr	Arg	Gln	Arg	155	160	165	
Arg	Ser	Gly	Arg	Ala	Trp	Tyr	Leu	Gly	Leu	Asp	Lys	Glu	Gly	Gln	170	175	180	
Val	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Ala	Ala	Ala	His	185	190	195	
Phe	Leu	Pro	Lys	Leu	Leu	Glu	Val	Ala	Met	Tyr	Gln	Glu	Pro	Ser	200	205	210	
Leu	His	Ser	Val	Pro	Glu	Ala	Ser	Pro	Ser	Ser	Pro	Pro	Ala	Pro	215	220	225	

<210> 498

<211> 744

<212> DNA  
<213> Homo Sapien

<400> 498  
atggccgcgg ccatcgctag cggcttgatc cgccagaagc ggcaggcgcg 50  
ggagcagcac tgggaccggc cgtctgccag caggaggcgg agcagcccca 100  
gcaagaaccg cgggctctgc aacggcaacc tgggtggatat cttotccaaa 150  
gtgcgcactct tcggcctcaa gaacgcgagg ttgaggcgcc aagatcccca 200  
gctcaagggt atagtacca ggttatattg caggcaaggc tactactttg 250  
aaatgcaccc ccatggagct ctcatggaa ccaaggatga cagcactaat 300  
tctacactct tcaacctcat accagtggga ctactgtgtg ttgccatcca 350  
gggagtga aaacagggtgt atatagccat gaatggagaa ggttacctct 400  
accatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450  
gaaaattatt atgtaatcta ctcatccatg ttgtacagac aacaggaatc 500  
tggtagagcc tggtttttgg gattaaataa ggaagggcaa gctatgaaag 550  
ggaacagagt aaagaaaacc aaaccagcag ctcatcttct acccaagcca 600  
ttggaagtgt ccatgtaccg agaaccatct ttgcatgatg ttgggggaaac 650  
ggtcccgaa cctgggggtga cgccaagtaa aagcacaagt gcgtctgcaa 700  
taatgaatgg aggcaaacca gtcaacaaga gtaagacaac atag 744

<210> 499  
<211> 247  
<212> PRT  
<213> Homo Sapien

<400> 499  
Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln 15  
1 5 10  
Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg 30  
20 25  
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val 45  
35 40  
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg 60  
50 55 60  
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu 75  
65 70  
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala 90  
80 85 90  
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn 105  
95 100  
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys 120  
110 115 120

Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro  
 125 130 135  
 Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe  
 140 145 150  
 Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln Gln  
 155 160 165  
 Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly Gln  
 170 175 180  
 Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro Ala Ala His  
 185 190 195  
 Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu Pro Ser  
 200 205 210  
 Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr Pro  
 215 220 225  
 Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro  
 230 235 240  
 Val Asn Lys Ser Lys Thr Thr  
 245

<210> 500

<211> 2906

<212> DNA

<213> Homo Sapien

<400> 500

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 ggcgtgtggg tgccttgcaa aaatgaagga tgcaggacgc agctttctcc 100  
 tggaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150  
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200  
 acacagggag cattcaagaa tgaataaac cagagttaga cccgcggggg 250  
 ttggtgtgtt ctgacataaa taaataatct taaagcagct gttcccctcc 300  
 ccaccccaaa aaaaaaggat gattggaaat gaagaaccga ggattccaa 350  
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400  
 gatatttttt gaatgaaaag ttgtgggctt ttttagtaaa gtaagaact 450  
 ggtgtggtgg tgttttcttt tcttttgaa ttccccacaa gaggagagga 500  
 aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550  
 gcagattgag gcattgattg ggggagagaa accagcagag cacagttgga 600  
 tttgtgccta tgttgactaa aattgacgga taattgcagt tggatttttc 650  
 ttcatacaacc tctttttttt taaattttta ttccttttgg tatcaagatc 700  
 atgcgttttc tcttgttctt aaccacctgg atttccatct ggatgttgct 750

gtgatcagtc tgaatacaaa ctgtttgaat tccagaagga ccaacaccag 800  
 ataaattatg aatgttgaac aagatgacct tacatccaca gcagataatg 850  
 ataggctcta ggtttaacag ggcctattt gacccctctg ttgtgggtgct 900  
 gctggtctct caacttcttg tgggtgctgg tctggtgcgg gctcagacct 950  
 gcccttctgt gtgctcctgc agcaaccagt toagcaagggt gattttgtgt 1000  
 cggaaaaacc tgcgtgaggt tccggatggc atctccacca acacacggct 1050  
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 agcaacttgag gcaacttgaa atcctacagt tgagtaggaa ccatatcaga 1150  
 accattgaaa ttggggcttt caatggctcg gcgaacctca acactctgga 1200  
 actctttgac aatcgtctta ctaccatccc gaatggagct tttgtatact 1250  
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 ccttcttatg cttttaacag aattccttct ttgcgccgac tagacttagg 1350  
 ggaattgaaa agactttcat acatctcaga aggtgccttt gaaggctctg 1400  
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 aacctcacac cgctcataaa actagatgag ctggatcttt ctgggaatca 1500  
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 aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacatc 1950  
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 acaaatgtaa ctgtgcaaga tacaggcatg tacacatgta tggtgagtaa 2100  
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 ccactatccc tttctcttac ttttcaacog tcacagtaga gactatggaa 2200  
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 gcacaaggtc gacagagaaa accttcacca tccagtgac tgatataaac 2350

agtgggatcc caggaattga tgaggatcatg aagactacca aaatcatcat 2400  
 tgggtgtttt gtggccatca cactcatggc tgcagtcatg ctggtcattt 2450  
 tctacaagat gaggaagcag caccatcggc aaaaccatca cgcccaaca 2500  
 aggactgttg aaattattaa tgtggatgat gagattacgg gagacacacc 2550  
 catggaagac cacctgccca tgccgtgctat cgagcatgag cacctaaatc 2600  
 actataactc atacaatctt ccttcaacc acacaacaac agttaacaca 2650  
 ataaattcaa tacacagttc agtgcataaa ccgttattga tccgaatgaa 2700  
 ctctaaagac aatgtacaag agactcaaat ctaaaacatt tacagagtta 2750  
 caaaaaacaa acaatcaaaa aaaaagacag ttattaaaa atgacacaaa 2800  
 tgactgggct aaattctactg ttcaaaaaa gtgtctttac aaaaaacaa 2850  
 aaaagaaaag aaatttattt attaaaaatt ctattgtgat ctaaagcaga 2900  
 caaaaa 2906

<210> 501  
 <211> 640  
 <212> PRT  
 <213> Homo Sapien

<400> 501  
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 Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln  
 35 40 45  
 Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val  
 50 55 60  
 Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser  
 65 70 75  
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile  
 80 85 90  
 Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu  
 95 100 105  
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe  
 110 115 120  
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg  
 125 130 135  
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu  
 140 145 150  
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser  
 155 160 165

Tyr	Ala	Phe	Asn	Arg	Ile	Pro	Ser	Leu	Arg	Arg	Leu	Asp	Leu	Gly	170	175	180
Glu	Leu	Lys	Arg	Leu	Ser	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	185	190	195
Leu	Ser	Asn	Leu	Arg	Tyr	Leu	Asn	Leu	Ala	Met	Cys	Asn	Leu	Arg	200	205	210
Glu	Ile	Pro	Asn	Leu	Thr	Pro	Leu	Ile	Lys	Leu	Asp	Glu	Leu	Asp	215	220	225
Leu	Ser	Gly	Asn	His	Leu	Ser	Ala	Ile	Arg	Pro	Gly	Ser	Phe	Gln	230	235	240
Gly	Leu	Met	His	Leu	Gln	Lys	Leu	Trp	Met	Ile	Gln	Ser	Gln	Ile	245	250	255
Gln	Val	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Asn	Leu	Gln	Ser	Leu	Val	260	265	270
Glu	Ile	Asn	Leu	Ala	His	Asn	Asn	Leu	Thr	Leu	Leu	Pro	His	Asp	275	280	285
Leu	Phe	Thr	Pro	Leu	His	His	Leu	Glu	Arg	Ile	His	Leu	His	His	290	295	300
Asn	Pro	Trp	Asn	Cys	Asn	Cys	Asp	Ile	Leu	Trp	Leu	Ser	Trp	Trp	305	310	315
Ile	Lys	Asp	Met	Ala	Pro	Ser	Asn	Thr	Ala	Cys	Cys	Ala	Arg	Cys	320	325	330
Asn	Thr	Pro	Pro	Asn	Leu	Lys	Gly	Arg	Tyr	Ile	Gly	Glu	Leu	Asp	335	340	345
Gln	Asn	Tyr	Phe	Thr	Cys	Tyr	Ala	Pro	Val	Ile	Val	Glu	Pro	Pro	350	355	360
Ala	Asp	Leu	Asn	Val	Thr	Glu	Gly	Met	Ala	Ala	Glu	Leu	Lys	Cys	365	370	375
Arg	Ala	Ser	Thr	Ser	Leu	Thr	Ser	Val	Ser	Trp	Ile	Thr	Pro	Asn	380	385	390
Gly	Thr	Val	Met	Thr	His	Gly	Ala	Tyr	Lys	Val	Arg	Ile	Ala	Val	395	400	405
Leu	Ser	Asp	Gly	Thr	Leu	Asn	Phe	Thr	Asn	Val	Thr	Val	Gln	Asp	410	415	420
Thr	Gly	Met	Tyr	Thr	Cys	Met	Val	Ser	Asn	Ser	Val	Gly	Asn	Thr	425	430	435
Thr	Ala	Ser	Ala	Thr	Leu	Asn	Val	Thr	Ala	Ala	Thr	Thr	Thr	Pro	440	445	450
Phe	Ser	Tyr	Phe	Ser	Thr	Val	Thr	Val	Glu	Thr	Met	Glu	Pro	Ser	455	460	465
Gln	Asp	Glu	Ala	Arg	Thr	Thr	Asp	Asn	Asn	Val	Gly	Pro	Thr	Pro	470	475	480



Val Val Asp Trp	Glu Thr Thr Asn Val Thr Ser Leu Thr Pro	485	490	495
Gln Ser Thr Arg	Ser Thr Glu Lys Thr Phe Thr Ile Pro Val Thr	500	505	510
Asp Ile Asn Ser	Gly Ile Pro Gly Ile Asp Glu Val Met Lys Thr	515	520	525
Thr Lys Ile Ile	Ile Gly Cys Phe Val Ala Ile Thr Leu Met Ala	530	535	540
Ala Val Met Leu	Val Ile Phe Tyr Lys Met Arg Lys Gln His His	545	550	555
Arg Gln Asn His	His Ala Pro Thr Arg Thr Val Glu Ile Ile Asn	560	565	570
Val Asp Asp Glu	Ile Thr Gly Asp Thr Pro Met Glu Ser His Leu	575	580	585
Pro Met Pro Ala	Ile Glu His Glu His Leu Asn His Tyr Asn Ser	590	595	600
Tyr Lys Ser Pro	Phe Asn His Thr Thr Thr Val Asn Thr Ile Asn	605	610	615
Ser Ile His Ser	Ser Val His Glu Pro Leu Leu Ile Arg Met Asn	620	625	630
Ser Lys Asp Asn	Val Gln Glu Thr Gln Ile	635	640	

<210> 502

<211> 2458

<212> DNA

<213> Homo Sapien

<400> 502

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 ccagctgcc cgaggtccgt cggagcgcc cggccgccc ggagccaagc 150  
 agcaactgag cggggaagcg cccgcgtccg gggatcggga tgtccctcct 200  
 ccttctctc ttgctagttt cctactatgt tggaaacctg gggactcaca 250  
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 cgataatgaa gggaaacaaa aagtgggtgat cacttactcc agtcgtcatg 400  
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 aatttcctgg caggagatgc ctccctgcag attgaacctc tgaagcccag 500  
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 ccagaggtga gaggttctga accaaagaaa gtccaccatg ctaatctgac 1250  
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 cgggcagtgt gccaggcacc tgtaggaaaa tccagcaggt ggaggttgca 2400  
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<210> 503

<211> 373

<212> PRT

<213> Homo Sapien

<400> 503

Met	Ser	Leu	Leu	Leu	Leu	Leu	Leu	Val	Ser	Tyr	Tyr	Val	Gly
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Thr	Leu	Gly	Thr	His	Thr	Glu	Ile	Lys	Arg	Val	Ala	Glu	Lys
				20				25					30
Val	Thr	Leu	Pro	Cys	His	His	Gln	Leu	Gly	Leu	Pro	Glu	Asp
				35				40					45
Thr	Leu	Asp	Ile	Glu	Trp	Leu	Leu	Thr	Asp	Asn	Glu	Gly	Asn
				50				55					60
Lys	Val	Val	Ile	Thr	Tyr	Ser	Ser	Arg	His	Val	Tyr	Asn	Asn
				65				70					75
Thr	Glu	Glu	Gln	Lys	Gly	Arg	Val	Ala	Phe	Ala	Ser	Asn	Phe
				80				85					90
Ala	Gly	Asp	Ala	Ser	Leu	Gln	Ile	Glu	Pro	Leu	Lys	Pro	Ser
				95				100					105
Glu	Gly	Arg	Tyr	Thr	Cys	Lys	Val	Lys	Asn	Ser	Gly	Arg	Tyr
				110				115					120
Trp	Ser	His	Val	Ile	Leu	Lys	Val	Leu	Val	Arg	Pro	Ser	Lys
				125				130					135
Lys	Cys	Glu	Leu	Glu	Gly	Glu	Leu	Thr	Glu	Gly	Ser	Asp	Leu
				140				145					150
Leu	Gln	Cys	Glu	Ser	Ser	Ser	Gly	Thr	Glu	Pro	Ile	Val	Tyr
				155				160					165
Trp	Gln	Arg	Ile	Arg	Glu	Lys	Glu	Gly	Glu	Asp	Glu	Arg	Leu
				170				175					180
Pro	Lys	Ser	Arg	Ile	Asp	Tyr	Asn	His	Pro	Gly	Arg	Val	Leu
				185				190					195
Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys	Thr
				200				205					210
Gly	Asn	Glu	Ala	Gly	Lys	Glu	Ser	Cys	Val	Val	Arg	Val	Thr
				215				220					225

Gln Tyr Val Gln Ser Ile Gly Met Val Ala Gly Ala Val Thr Gly	230	235	240
Ile Val Ala Gly Ala Leu Leu Ile Phe Leu Leu Val Trp Leu Leu	245	250	255
Ile Arg Arg Lys Asp Lys Glu Arg Tyr Glu Glu Glu Glu Arg Pro	260	265	270
Asn Glu Ile Arg Glu Asp Ala Glu Ala Pro Lys Ala Arg Leu Val	275	280	285
Lys Pro Ser Ser Ser Ser Ser Gly Ser Arg Ser Ser Arg Ser Gly	290	295	300
Ser Ser Ser Thr Arg Ser Thr Ala Asn Ser Ala Ser Arg Ser Gln	305	310	315
Arg Thr Leu Ser Thr Asp Ala Ala Pro Gln Pro Gly Leu Ala Thr	320	325	330
Gln Ala Tyr Ser Leu Val Gly Pro Glu Val Arg Gly Ser Glu Pro	335	340	345
Lys Lys Val His His Ala Asn Leu Thr Lys Ala Glu Thr Thr Pro	350	355	360
Ser Met Ile Pro Ser Gln Ser Arg Ala Phe Gln Thr Val	365	370	

<210> 504  
 <211> 3060  
 <212> DNA  
 <213> Homo Sapien

<400> 504  
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 ctccgtgtgcg gtagtagtga ttctgccaga agtttgagta tcaactactcc 150  
 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200  
 aatttcagct tagtcccgaa gaccagggac cgctggacat cgagtggctg 250  
 atatcaccag ctgataatca gaagtggtat caagtgatta ttttatattc 300  
 tggagacaaa atttatgatg actactatcc agatctgaaa ggcgcagtag 350  
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 aatttacaac tgtcagatat tggcacatat cagtgcgaag tgaaaaaagc 450  
 tctctgtgtt gcaaataaga agattcatct ggtagtctt gttaagcctt 500  
 caggtgcgag atgttacgtt gatggatctg aagaaattgg aagtgaattt 550  
 aagataaaat gtgaacaaaa agaaggttca cttccattac agtatgatg 600  
 gcaaaaattg tctgactcac agaaaatgcc cacttcatgg tttagcagaaa 650  
 tgacttcctc tgttatatct gtaaaaaaat cctcttctga gtactctggg 700

acatacagct gtacagtcag aaacagagtg ggctctgac agtgccctgtt 750  
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 ctttgaaacg actcctcaga gtccgactct cccacctgct aagtccaagt 1100  
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 cgttctgttt aatgtttttg ctatttagtt aaatacattg aagggaata 1550  
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 ctcaaaactat tttttatttg caactacatg atttoacaca attctcttaa 1650  
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 cttctataaa aataagtttg atggtttggc ccactatact tcaactactat 1950  
 tagtaagaac ttttaacttt taatgtgtag taaggtttat tctacctttt 2000  
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 taccatgtc actggaattg ggcgatatgg tttatttttt cttccctgat 2150  
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 cctogataca ttcttggtt ttttctgggc aaagggtgcc acattggaag 2250  
 aggtggaagt ataagtcttg aaatctgtag ggaagagaac acattaaatt 2300

aattcaaaagg aaaaaatcat catctatgtt ccagatttct cattaagaac 2350  
 aaagttacc acaacactga gatcacatct aagtgacact cctattgtca 2400  
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<210> 505

<211> 352

<212> PRT

<213> Homo Sapien

<400> 505

Met	Ala	Leu	Leu	Leu	Cys	Phe	Val	Leu	Leu	Cys	Gly	Val	Val	Asp
1				5						10				15
Phe	Ala	Arg	Ser	Leu	Ser	Ile	Thr	Thr	Pro	Glu	Glu	Met	Ile	Glu
				20					25					30
Lys	Ala	Lys	Gly	Glu	Thr	Ala	Tyr	Leu	Pro	Cys	Lys	Phe	Thr	Leu
				35					40					45
Ser	Pro	Glu	Asp	Gln	Gly	Pro	Leu	Asp	Ile	Glu	Trp	Leu	Ile	Ser
				50					55					60
Pro	Ala	Asp	Asn	Gln	Lys	Val	Asp	Gln	Val	Ile	Ile	Leu	Tyr	Ser
				65					70					75
Gly	Asp	Lys	Ile	Tyr	Asp	Asp	Tyr	Tyr	Pro	Asp	Leu	Lys	Gly	Arg
				80					85					90
Val	His	Phe	Thr	Ser	Asn	Asp	Leu	Lys	Ser	Gly	Asp	Ala	Ser	Ile
				95					100					105
Asn	Val	Thr	Asn	Leu	Gln	Leu	Ser	Asp	Ile	Gly	Thr	Tyr	Gln	Cys
				110					115					120
Lys	Val	Lys	Lys	Ala	Pro	Gly	Val	Ala	Asn	Lys	Lys	Ile	His	Leu

	125		130		135
Val Val Leu Val	Lys Pro Ser Gly Ala	Arg Cys Tyr Val Asp Gly			
	140	145			
Ser Glu Glu Ile	Gly Ser Asp Phe Lys	Ile Lys Cys Glu Pro Lys			
	155	160			
Glu Gly Ser Leu	Pro Leu Gln Tyr Glu	Trp Gln Lys Leu Ser Asp			
	170	175			
Ser Gln Lys Met	Pro Thr Ser Trp Leu	Ala Glu Met Thr Ser Ser			
	185	190			
Val Ile Ser Val	Lys Asn Ala Ser Ser	Glu Tyr Ser Gly Thr Tyr			
	200	205			
Ser Cys Thr Val	Arg Asn Arg Val Gly	Ser Asp Gln Cys Leu Leu			
	215	220			
Arg Leu Asn Val	Val Pro Pro Ser Asn	Lys Ala Gly Leu Ile Ala			
	230	235			
Gly Ala Ile Ile	Gly Thr Leu Leu Ala	Leu Ala Leu Ile Gly Leu			
	245	250			
Ile Ile Phe Cys	Cys Arg Lys Lys Arg	Arg Glu Glu Lys Tyr Glu			
	260	265			
Lys Glu Val His	His Asp Ile Arg Glu	Asp Val Pro Pro Pro Lys			
	275	280			
Ser Arg Thr Ser	Thr Ala Arg Ser Tyr	Ile Gly Ser Asn His Ser			
	290	295			
Ser Leu Gly Ser	Met Ser Pro Ser Asn	Met Glu Gly Tyr Ser Lys			
	305	310			
Thr Gln Tyr Asn	Gln Val Pro Ser Glu	Asp Phe Glu Arg Thr Pro			
	320	325			
Gln Ser Pro Thr	Leu Pro Pro Ala Lys	Phe Lys Tyr Pro Tyr Lys			
	335	340			
Thr Asp Gly Ile	Thr Val Val				
	350				

<210> 506  
 <211> 1705  
 <212> DNA  
 <213> Homo Sapien

<400> 506  
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 ccagctgcct ccaggcagcc agccctcaag catcacttac aggaccagag 150  
 ggacaagaca tgactgtgat gaggagctgc ttctgccaat ttaacaccaa 200  
 gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

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 ggataacatc acgagtggcc ggctgctgca gcaggagggt ctgcagaacg 550  
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 tctgaagtc tctctactc tggccaacaa ctttgttctc atcgtgtcac 700  
 aactgcaacc cagtcaagaa aatgagatgt tttccatcag agacagtgc 750  
 cacaggcggt ttctgctatt ccggagagca ttcaaacagt tggacgtaga 800  
 agcagctctg accaaagccc ttggggaagt ggacattctt ctgacctgga 850  
 tgcagaaatt ctacaagctc tgaatgtcta gaccaggacc tccctcccc 900  
 tggcactggt ttgttccctg tgtcatttca aacagtctcc ctctctatgc 950  
 tgttccactg acacttcacg cccttggcc a tgggtcccat tcttggccca 1000  
 ggattattgt caaagaagtc attctttaag cagcgccagt gacagtcagg 1050  
 gaagggtgct ctggatgctg tgaagagctc acagagaaga ttctgttatt 1100  
 tattacaact ctatttaatt aatgtcagta tttcaactga agttctattt 1150  
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 cttctttacc cctcacaatc cttgccacag tgtggggcag tggatgggtg 1250  
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 atgaaaatca cactgtcttc tgatatctgc agggacagag cattgggggtg 1400  
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 togccagctc accccatcat ccccttccct tgggtgccctc cttttttttt 1550  
 tatcctagtc attcttccct aatcttccac ttgagtgtca agctgacctt 1600  
 gctgatgggt acattgcacc tggagtgtact atccaatctg tgatgacatt 1650  
 ccttgctaataaaaagacaac ataactccaa aaaaaaaaaa aaaaaaaaaa 1700  
 aaaaa 1705

<210> 507  
 <211> 206  
 <212> PRT



<213> Homo Sapien

<400> 507

Met	Asn	Phe	Gln	Gln	Arg	Leu	Gln	Ser	Leu	Trp	Thr	Leu	Ala	Arg
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Pro	Phe	Cys	Pro	Pro	Leu	Leu	Ala	Thr	Ala	Ser	Gln	Met	Gln	Met
				20					25					30
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Leu	Trp	Ser	Gln
				35					40					45
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln
				50					55					60
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala
				65					70					75
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg
				80					85					90
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser
				95					100					105
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val
				110					115					120
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys
				125					130					135
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln
				140					145					150
Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser
				155					160					165
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu
				170					175					180
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile
				185					190					195
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu				
				200					205					

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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cggtctcagg agatgtctga ttccacaga catgcacat atagaagaga 150  
gtttccaaga aatcaaaaga gccatccaag ctaaggacac ctccccaaat 200  
gtcactatcc tgtccacatt ggagactctg cagatcatta agccottaga 250  
tgtgtgctgc gtgaccaaga acctcctggc gttctacgtg gacagggtgt 300

tcaaggatca tcaggagcca aacccccaaa tcttgagaaa aatcagcagc 350  
 attgccaaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400  
 acagaggcag tgtcactgca ggcaggaagc caccaatgcc accagagtca 450  
 tccatgacaa ctatgatcag ctggagggtcc acgctgctgc cattaaatcc 500  
 ctggggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550  
 aatgtttctca gcttgatgac aaggaacctg tatagtgtac cagggatgaa 600  
 caccocctgt gcggtttact gtgggagaca gccaccttg aaggggaagg 650  
 agatggggaa ggcccctgac agctgaaagt cccactggct ggcctcaggc 700  
 tgtcttattc cgcttgaaaa taggcaaaaa gtctactgtg gtatttgtaa 750  
 taaactctat ctgctgaaag ggcctgcagg ccactcctgg agtaaagggc 800  
 tgccttccca tctaatttat tgtaaagtca tatagtcat gtctgtgatg 850  
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 ataaattcca tattttacct atga 924

<210> 509

<211> 177

<212> PRT

<213> Homo Sapien

<400> 509

Met	Lys	Leu	Gln	Cys	Val	Ser	Leu	Trp	Leu	Leu	Gly	Thr	Ile	Leu	1	5	10	15
Ile	Leu	Cys	Ser	Val	Asp	Asn	His	Gly	Leu	Arg	Arg	Cys	Leu	Ile	20	25	30	
Ser	Thr	Asp	Met	His	His	Ile	Glu	Glu	Ser	Phe	Gln	Glu	Ile	Lys	35	40	45	
Arg	Ala	Ile	Gln	Ala	Lys	Asp	Thr	Phe	Pro	Asn	Val	Thr	Ile	Leu	50	55	60	
Ser	Thr	Leu	Glu	Thr	Leu	Gln	Ile	Ile	Lys	Pro	Leu	Asp	Val	Cys	65	70	75	
Cys	Val	Thr	Lys	Asn	Leu	Leu	Ala	Phe	Tyr	Val	Asp	Arg	Val	Phe	80	85	90	
Lys	Asp	His	Gln	Glu	Pro	Asn	Pro	Lys	Ile	Leu	Arg	Lys	Ile	Ser	95	100	105	
Ser	Ile	Ala	Asn	Ser	Phe	Leu	Tyr	Met	Gln	Lys	Thr	Leu	Arg	Gln	110	115	120	
Cys	Gln	Glu	Gln	Arg	Gln	Cys	His	Cys	Arg	Gln	Glu	Ala	Thr	Asn	125	130	135	
Ala	Thr	Arg	Val	Ile	His	Asp	Asn	Tyr	Asp	Gln	Leu	Glu	Val	His	140	145	150	
Ala	Ala	Ala	Ile	Lys	Ser	Leu	Gly	Glu	Leu	Asp	Val	Phe	Leu	Ala				

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<211> 996  
<212> DNA  
<213> Homo Sapien

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<210> 511  
<211> 251  
<212> PRT  
<213> Homo Sapien

<400> 511  
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Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	
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Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	
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Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	
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Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	
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His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	
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Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	
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Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	
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Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	
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Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser	
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Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro	
				185					190					195	
Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln	Glu	Leu	
				200					205					210	
Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu	Gly	
				215					220					225	
Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly	
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<210> 512

<211> 2015

<212> DNA

<213> Homo Sapien

<400> 512

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 <212> PRT  
 <213> Homo Sapien

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 35 40 45  
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu  
 50 55 60  
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile  
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 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg  
 80 85 90  
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu  
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 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu  
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 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro  
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 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu  
 140 145 150  
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr  
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 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser  
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 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg  
 200 205 210  
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile  
 215 220 225  
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu  
 230 235 240  
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile  
 245 250 255

Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp	260	265	270
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser	275	280	285
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile	290	295	300
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr	305	310	315
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro	320	325	330
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr	335	340	345
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu	350	355	360
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val	365	370	375
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly	380	385	390
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro	395	400	405
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr	410	415	420
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro	425	430	435
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr	440	445	450
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met	455	460	465
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Gln Thr

<210> 514

<211> 2284

<212> DNA

<213> Homo Sapien

<400> 514

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gaccaaactt aaactgaaat ttaaatgttt cttcggggga gaaggaggct 250

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 <212> PRT  
 <213> Homo Sapien

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 50 55 60  
 Glu Asp Cys Ile Asn Ser Cys Cys Ser Thr Lys Asn Ile Ser Gly  
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 95 100 105  
 Cys Pro Leu Lys Pro Ala Lys Gly Leu Met Ser Tyr Arg Ile Ile  
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 Thr Asp Phe Pro Ser Leu Thr Arg Asn Leu Pro Ser Gln Glu Leu  
 125 130 135  
 Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val  
 140 145 150  
 Thr Pro Leu Ala His His His Thr Asp Tyr Ser Lys Pro Thr Asp  
 155 160 165  
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 170 175 180  
 His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala Ser Ala Gln Leu  
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Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	
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Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	
				245					250					255	
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	
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Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	
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<211> 2749

<212> DNA

<213> Homo Sapien

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<221> unsure

<222> 1869, 1887

<223> unknown base

<400> 516

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 Asp Thr Val Ser Leu Gln Cys Thr Tyr Arg Glu Glu Leu Arg Asp  
 35 40 45  
 His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg  
 50 55 60  
 Cys Ser Gly Thr Ile Tyr Ala Glu Glu Gly Gln Glu Thr Met  
 65 70 75

Lys Gly Arg Val	Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu	80	85	90
Ile Val Thr Leu	Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr	95	100	105
Trp Cys Gly Val	Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile	110	115	120
Ser Leu Phe Val	Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser	125	130	135
Pro Thr Phe Gln	Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala	140	145	150
Lys Ala Gln Gln	Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu	155	160	165
Tyr Pro Ala Ala	Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu	170	175	180
Ala Pro Pro Leu	Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr	185	190	195
Ser Gln Tyr Thr	Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro	200	205	210
Ala Gly Ser Ser	Arg Pro Pro Met Gln Leu Asp Ser Thr Ser Ala	215	220	225
Glu Asp Thr Ser	Pro Ala Leu Ser Ser Gly Ser Ser Lys Pro Arg	230	235	240
Val Ser Ile Pro	Met Val Arg Ile Leu Ala Pro Val Leu Val Leu	245	250	255
Leu Ser Leu Leu	Ser Ala Ala Gly Leu Ile Ala Phe Cys Ser His	260	265	270
Leu Leu Leu Trp	Arg Lys Glu Ala Gln Gln Ala Thr Glu Thr Gln	275	280	285
Arg Asn Glu Lys	Phe Trp Leu Ser Arg Leu Thr Ala Glu Glu Lys	290	295	300
Glu Ala Pro Ser	Gln Ala Pro Glu Gly Asp Val Ile Ser Met Pro	305	310	315
Pro Leu His Thr	Ser Glu Glu Glu Leu Phe Ser Lys Phe Val	320	325	330

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